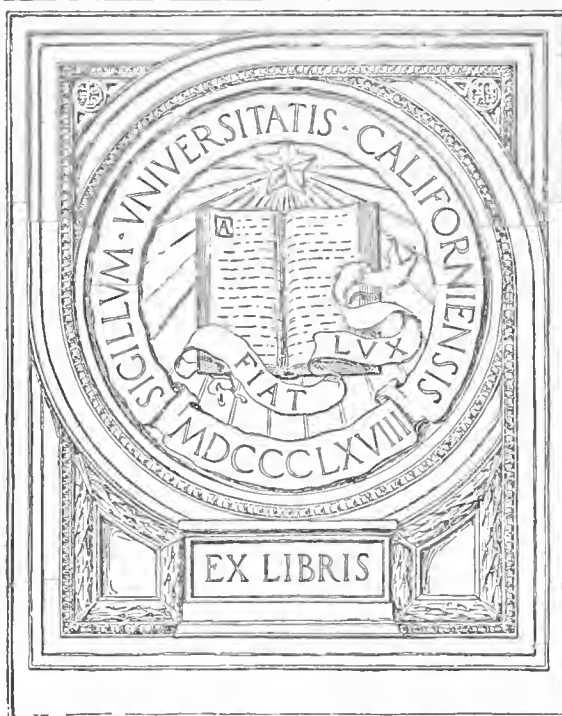




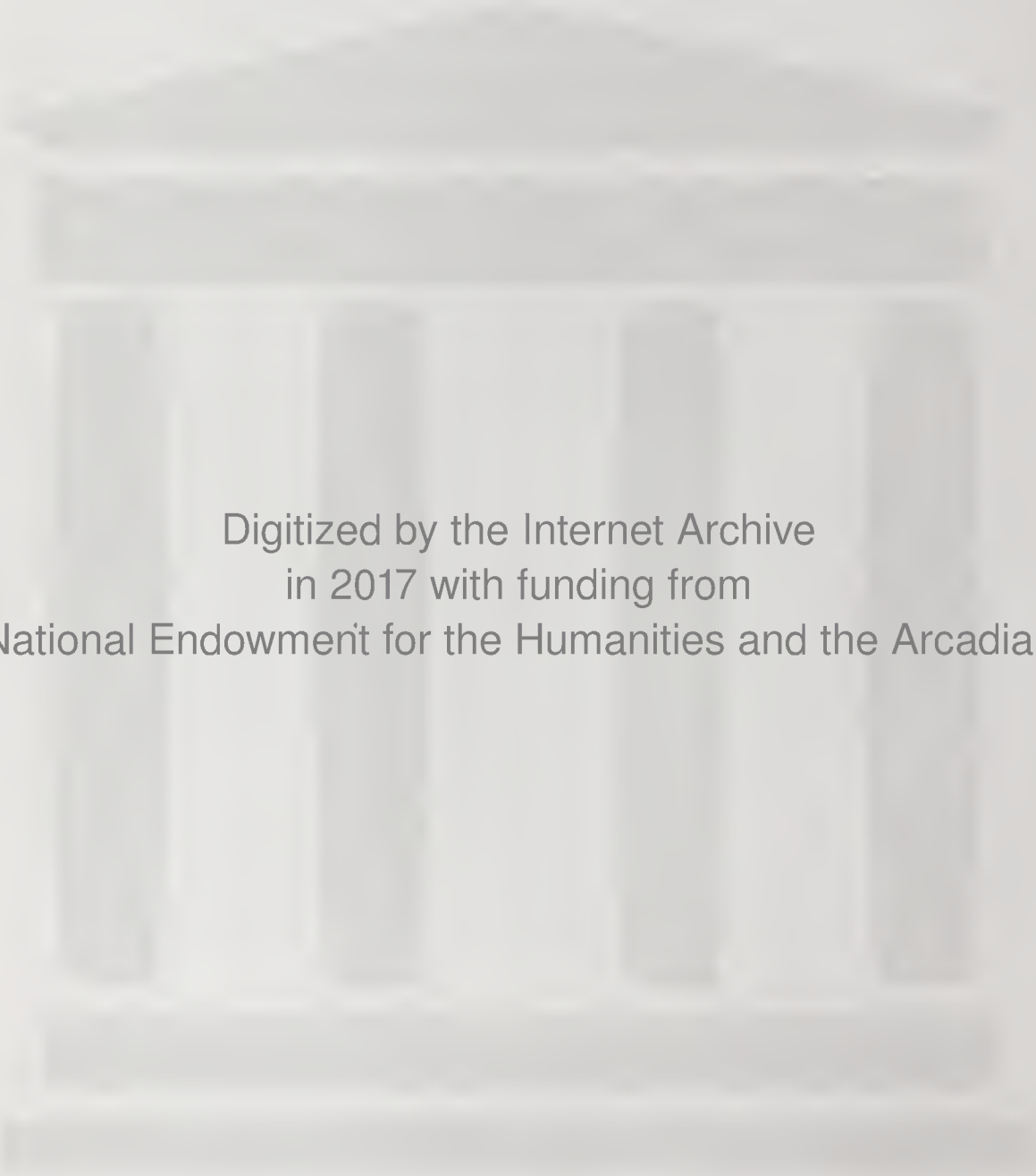
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ACCREDITED REPRESENTATIVE OF THE CALIFORNIA, NEVADA AND UTAH MEDICAL ASSOCIATIONS

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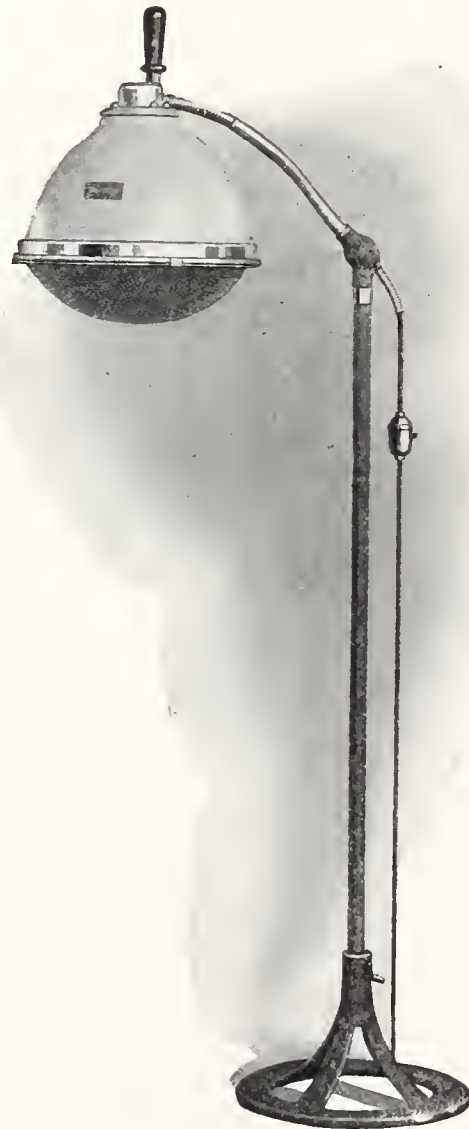
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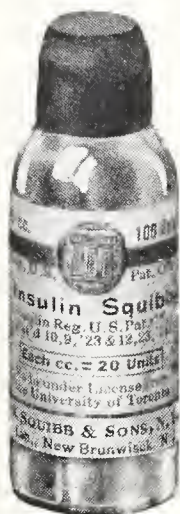
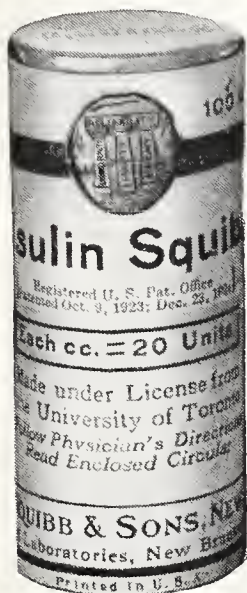
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## Utah State Medical Association

<p>H. P. KIRTLEY, Salt Lake City.....President WILLIAM L. RICH, Salt Lake City.....President-Elect M. M. CRITCHLOW, Salt Lake City.....Secretary</p>	<p>J. U. GIESY, 701 Medical Arts Building, Salt Lake City.....Associate Editor for Utah Place of next meeting.....Salt Lake City, September 9-11, 1930</p>
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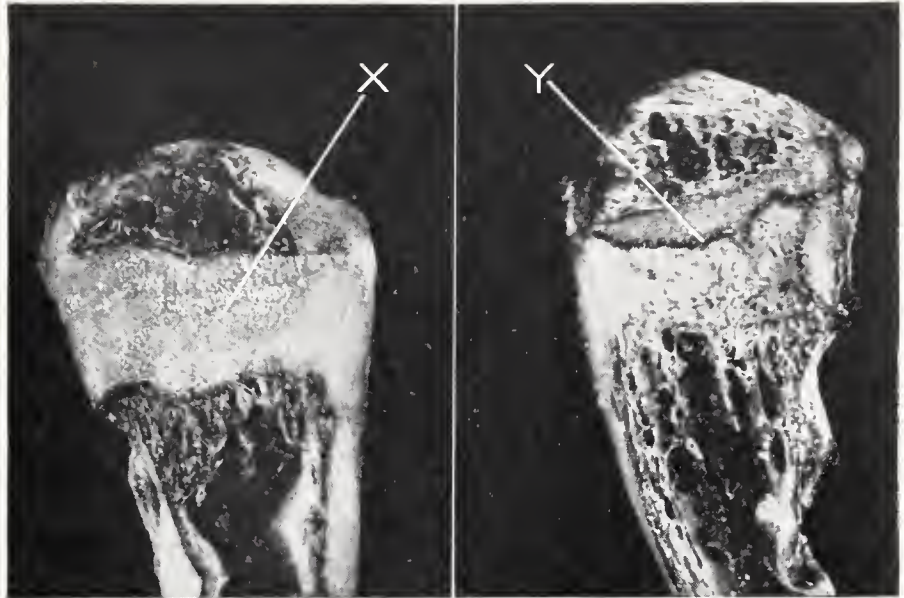
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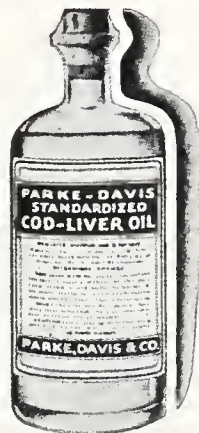
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### REFERENCES

- (1) New England Journal of Medicine, 200: 853-857, April 25, 1929.
- (2) From the Transactions of the Association of American Physicians, 1926.
- (3) Archives of Internal Medicine, April, 1929.
- (4) The Lancet, October 12, 1918.
- (5) Illinois Medical Journal, April, 1928.
- (6) Quoted Sutton; *ibid*.

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## BOOK REVIEWS

**Mrs. Eddy.—The Biography of a Virginal Mind.** By Edwin Franden Dakin. Charles Scribner's Sons, New York. 1929. Price, \$5.

Uncolored by tints of acquired divinity, undistorted by the high heat of controversy, illumined on all sides by the light of truth and understanding, the figure of Mrs. Eddy emerges from the pages of this book set high upon a broad base of facts gathered and articulated by Mr. Dakin in his years of study of the life of the founder of Christian Science.

Mr. Dakin has said that he began this study in an effort to acquaint himself with the environmental and personal problems of this founder of the latest religious-philosophical sect. He had previously and similarly studied the creators and doctrines of other sects and systems, endeavoring to find for himself a satisfying helief, but when he came to elicit the facts of Mrs. Eddy's life and development he found this no simple task—the available works were so definitely biased by the writers' belief or non-belief in Christian Science that no clear picture of the woman herself could be drawn from out the welter of words.

So the inquirer set himself the task of sifting fact from fancy and truth from fiction and by painstaking research and intensive study he accumulated the mass of knowledge from which he made his book.

And what a book it is! As chapter follows chapter, there is unrolled to the readers' eyes, if not blinded by unreasoning adherence or opposition to the doctrines promulgated by its subject, a fascinating panorama of a life which attained the external manifestations of power, prominence and even quasi-divinity in the eyes of many, but which ended still constricted and limited by the same inner deficiencies with which it began.

In his foreword to the book Mr. Dakin says, "Now it is because Mary Baker Eddy was a woman with an impassioned urge for life and self expression throbbing in her veins, and not a passive figure, that she has any possible human significance. It is because of this that hers was a gorgeous adventure—gorgeous no matter what the beginning and what the end. What if indeed she was a soul obsessed? Few who have become instruments for great ideas were ever less. What if she was indeed ignorant, distraught, fearful—lustful of power and glory—tortured by self and the universe—eager for wealth and grandeur? What if she made mad mystery out of ignorance, inspiration out of dread?"

"The streets of the whole world are thronged by those who are her kin.

"In these pages then will be found no fumbling apologia for Mary Baker Eddy, and no effort to fit her into the image of a saint on calloused knees. Any attempt to understand reality must at least be a braver human tribute than any feeble effort to extenuate. When she said that her course was 'impelled by a power not one's own,' it would not matter if she erred. For at least she was impelled. This is enough. The force in her of that great inner Will which in every being creates its own fulfillment—compensate how it must—needs no justification. It is beyond the little human labels of 'good' and 'evil.' Such a force in all things, in all men, is that which is."

So he tells the story of this "gorgeous adventure"—this inner impulsion that drove her on, despite the limitation of her environment, education and temperament, the poverty and struggles of her middle life and the sorrow of her marriages, to the leadership of the sect which she had founded and that great house at Chestnut Hill where she died, still the victim of those fears to which the tenets of her own church denied real existence.

The troubled evolution of Christian Science is necessarily told coincidentally because Mrs. Eddy could not be understood without knowledge of that contribution of hers to the distortion of reality which makes life endurable to her followers. However, the book is not a tract about Christian Science—it is the epic of Mary Baker Eddy.

The story is carefully annotated with the sources and authority for all of the statements contained within it and the reader feels always the understanding sympathy which the author brought to his task.

Mr. Dakin's narrative will not be abstracted here—it is too worthy of reading in its entirety to be shredded in a review. Get the book and read it; and if you cannot obtain it from your local booksellers who may have refused to deal in "error," you can obtain it by a letter and its price (\$5) sent to Charles Scribner's Sons, New York, N. Y.

T. H. K.

**Surgical and Medical Gynecologic Technic.** By Thomas H. Cherry. Pp. 678. Illustrated. Philadelphia: F. A. Davis Company. 1929.

This book gives an excellent description of the modern methods of therapy and diagnosis of gynecological diseases. As the author states, it is not intended to be used as a textbook for the undergraduate student, but as a handy reference for the practitioner. The physiology and symptomatology are purposely omitted.

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(Continued on Next Page)



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### BOOK REVIEWS

(Continued from Preceding Page)

is discussed in detail. A few of the other operations for the same conditions are only briefly mentioned. However, the technique for the operations discussed is based on sound surgical principles, namely, anatomy and pathology. The various steps for each operation are clearly described and are freely illustrated by simple, plain drawings which demonstrate the anatomy and pathology very well.

This book should meet with the approval of the busy practitioner.

C. L. C.

**Your Nose, Throat and Ears—Their Health and Care.** By L. W. Oaks and H. G. Merrill. Pp. 167. Illustrated. New York and London: D. Appleton. 1929. Price, \$1.50.

A manual for the layman, purported to set forth the simple hygienic measures that everyone should take for promoting the health of these important sense organs.

The manual plainly shows itself to be the result of an earnest and honest endeavor on the part of the author to remove from the class of mysteries the somewhat intricate physiology and anatomy of these special sense organs, and put the explanations and expositions in such language that the facts may be assimilated by the layman. Others have endeavored to do this and failed. Although this manual is a step in advance in the proper direction, it, too, cannot be wholly recommended. The language and terminology are such that the individual only equipped with high school education would not understand it if one could induce him to read it. The layman of higher educational assets would either seek a more scientific volume, or, as should be, seek the advice of his family physician or specialist.

L. F. M.

**Diseases of the Thyroid Gland.** By Arthur E. Hertzler, with a chapter on hospital management of goiter patients by Victor E. Chesky. Second edition. Pp. 286. Illustrated. St. Louis: The C. V. Mosby Company. 1929. Price, \$7.50.

For thirty years in his hospital at Haleslead, Kansas, Doctor Hertzler has been studying the problem of goiter as it presents itself in a nonendemic goiter area. This rewritten, second edition of his book presents the results of his study which possess a peculiar value. The author recognizes this fact for he states in his preface, "Whatever merit it may contain must rest in the fact that, because of my isolation, it has been possible to work untrammelled by the opinions of others."

Doctor Hertzler contends that time is an essential element in the study of goiter. This requires that the physician know the life history of his patient. The goiterous disease is not chronic in most cases," which reminds me that Hertzler once said (though I did not find the statement in his book) that the clinical history of a goiter patient ends only with the patient's death.

The seventy-six page chapter on pathological anatomy is the best part of the book, especially those pages which deal with "bosselated" goiters. When the author confines himself to the fields of surgery and pathology he is sound, but his comments upon the cardiac and other complications of toxic goiter are less appealing. He differs from most workers in this field of accepting the adrenalin test of Goetsch and in making a diagnosis of toxicity without elevated basal metabolic rate. I do not opine that most goiter surgeons would agree with him, either, in the use of adrenalin-novocain anesthesia for toxic goiter operations.

The book is well illustrated and fairly completely indexed, but could have been more carefully proof read.

A twenty-page chapter on the hospital management of goiter patients by Victor E. Chesky is included. The book concludes with chapters on topographic anatomy and operative technique.

J. M. R.

### BOOKS RECEIVED

**The Treatment of Varicose Veins of the Lower Extremities by Injection.** By T. Henry Treves-Barber, M. D., B. Sc. Cloth. Pp. 120. Price, \$2.25 net. New York: William Wood & Company, 1929.

**Annual Report of the Board of Regents of the Smithsonian Institution.** Showing the operations, expenditures, and condition of the institution for the year ending

June 30, 1928. Cloth. Pp. 763, illustrated. United States Government Printing Office, Washington. 1929.

**Hemorrhoids, The Injection Treatment and Pruritus Ani.** By Lawrence Goldbacher, M. D., Philadelphia. Cloth. Pp. 205, illustrated with thirty-one halftone and line engravings, some in colors. Price, \$3.50 net. Philadelphia: F. A. Davis Company, 1930.

**Pettibone's Textbook of Physiological Chemistry.** With Experiments. By J. F. McClendon, Ph. D., Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. Fourth edition, revised and rewritten. Cloth. Pp. 368. Price, \$3.75. St. Louis: The C. V. Mosby Company, 1929.

**The Science of Nutrition Simplified.** A Popular Introduction to dietetics. By D. D. Rosewarne, M. R. C. S., late Honorary Actinotherapist and Assistant Physician, City of London and East London Dispensary. Cloth. Pp. 314, illustrated. Price, \$3.50. St. Louis: The C. V. Mosby Company, 1929.

**Stone and Calculous Disease of the Urinary Organs.** By J. Swift Joly, M. D. (Dub.), F. R. C. S. (Eng.), Surgeon to St. Peter's Hospital for Stone; Consulting Urologist to St. James' Hospital Wandsworth. Cloth. Pp. 568, with 189 illustrations in the text and four colored plates. Price, \$16. St. Louis: The C. V. Mosby Company, 1929.

**An Introduction to the Study of the Nervous System.** By E. E. Hewer, D. Sc. (Lond.), Lecturer in Histology and Assistant Lecturer in Physiology at the London (Royal Free Hospital) School of Medicine for Women,

(Continued on Page 14)



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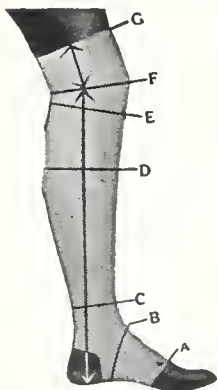
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## BOOKS RECEIVED

(Continued from Page 12)

and G. M. Sandes, M. B., B. S. (Lond.), Demonstrator in Anatomy at the above school. Cloth. Pp. 104. Price, \$6.50. St. Louis: The C. V. Mosby Company, 1929.

**Clinical Obstetrics.** By Paul T. Harper, Ph. B., M. D., Sc. D., F. A. C. S., Fellow of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons and of the New York Obstetrical Society. Cloth. Pp. 627, illustrated with eighty-four plates of engravings (250 figures) with legends and charts. Price, \$8 net. Philadelphia: F. A. Davis Company, 1930.

**Krankheiten und Hygiene der Warmen Länder.** Ein Lehrbuch für die Praxis. Von Prof. Dr. Reinhold Ruge, Marinegeneralstabsarzt A. D. in Klotzsche Bei Dresden; Prof. Dr. Peter Mühlens, Marinegeneralarzt A. D. und Vorsteher der Klinischen Abteilung am Tropeninstitut in Hamburg; Prof. Dr. Max Zur Verth, Marinegeneraloberarzt A. D. und Oberregierungs-Medizinalrat in Hamburg. 3., Vollständig Umgearbeitete Auflage. Mit 6 Farbigen und 1 Schwarzen Tafel, 1 Kurventafel und 489 Abbildungen im Text. Verlag, Leipzig: Georg Thieme, 1930.

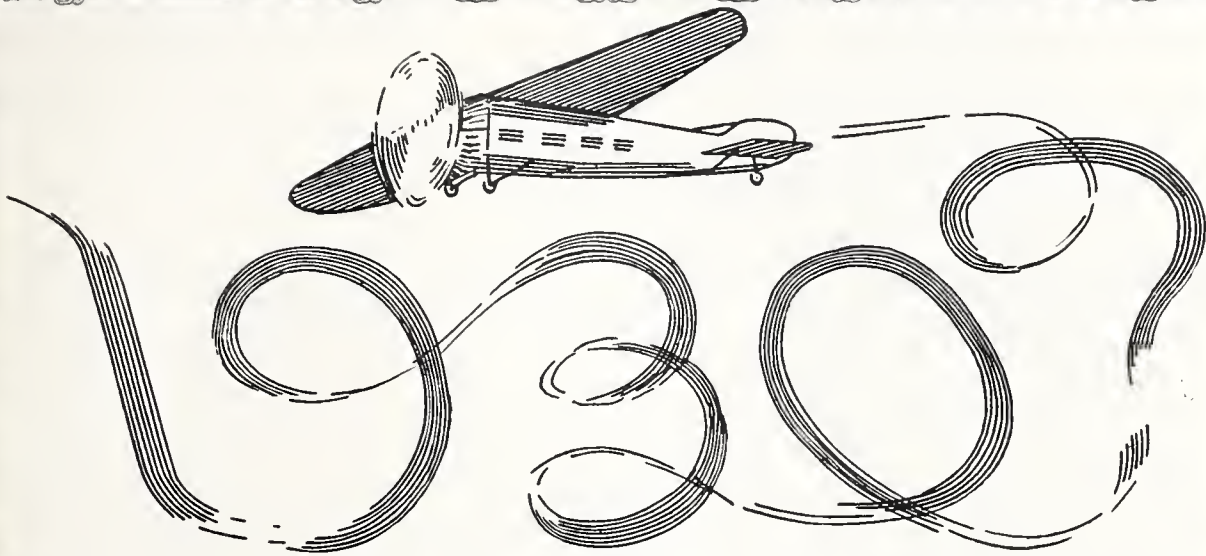
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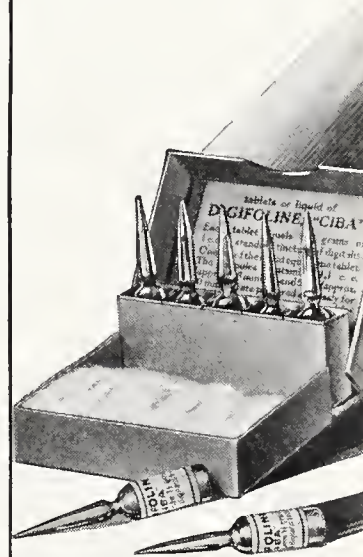
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(Continued on Page 26)



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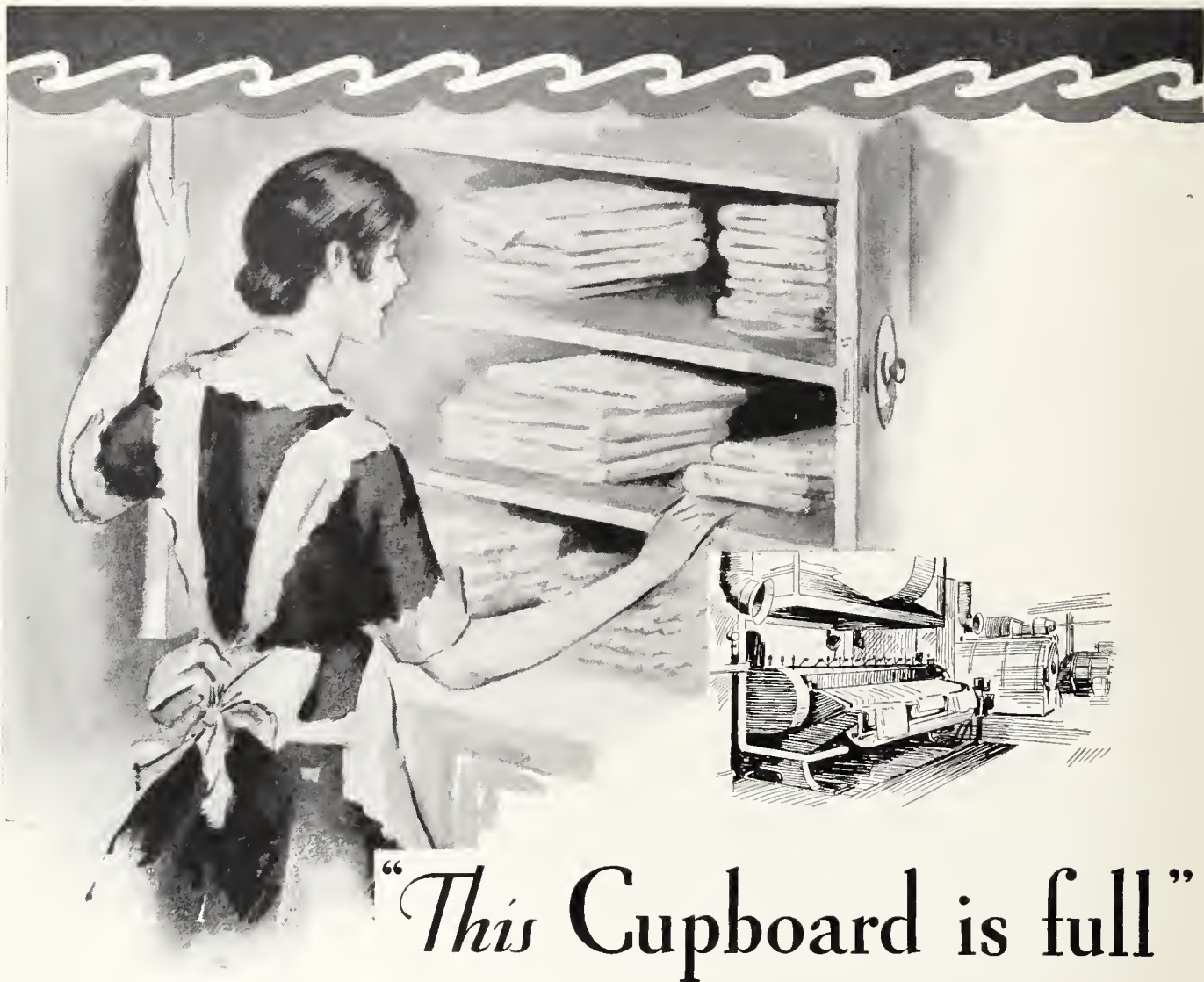
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<sup>1</sup>J. Biol. Chem., 76:2. <sup>2</sup>Ibid., 66:451.

<sup>3</sup>Ibid., 80:15. <sup>4</sup>Ibid., 76:251.

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## TRUTH ABOUT MEDICINES

(Continued from Page 19)

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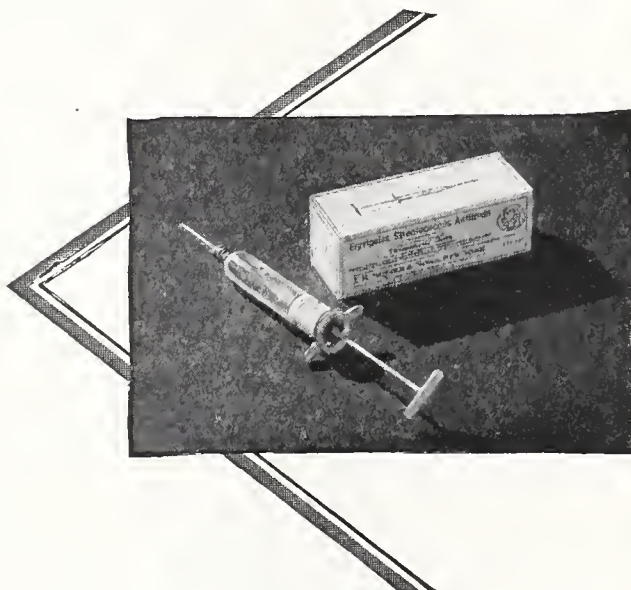
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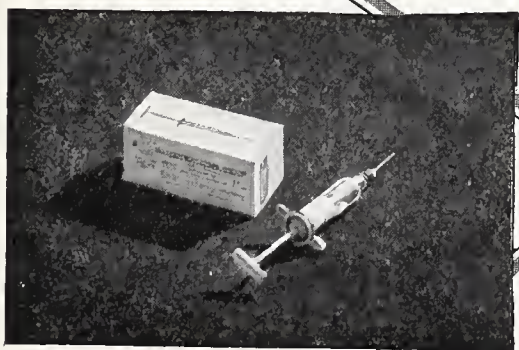


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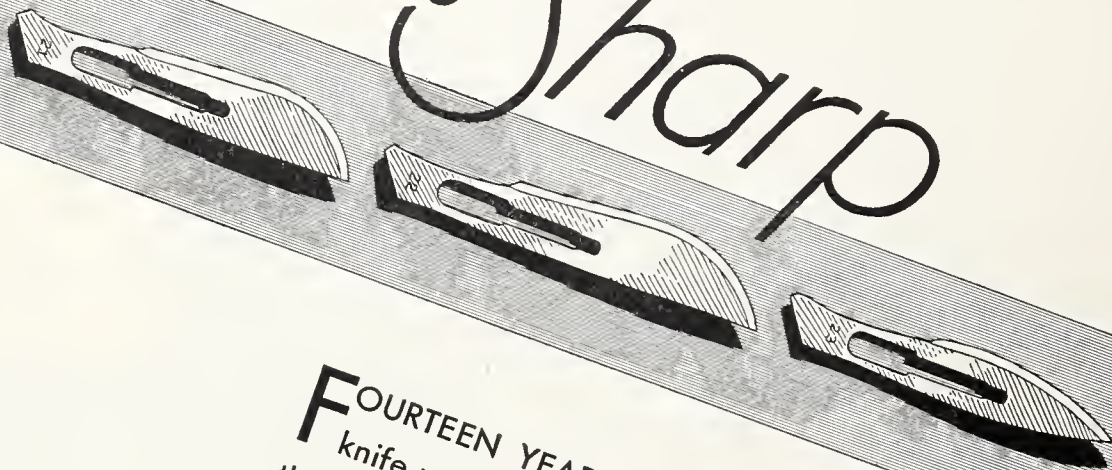
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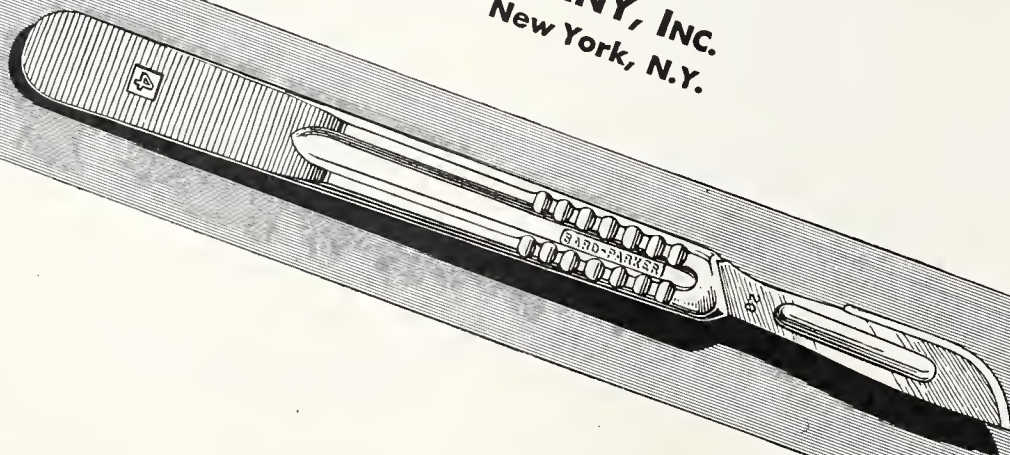


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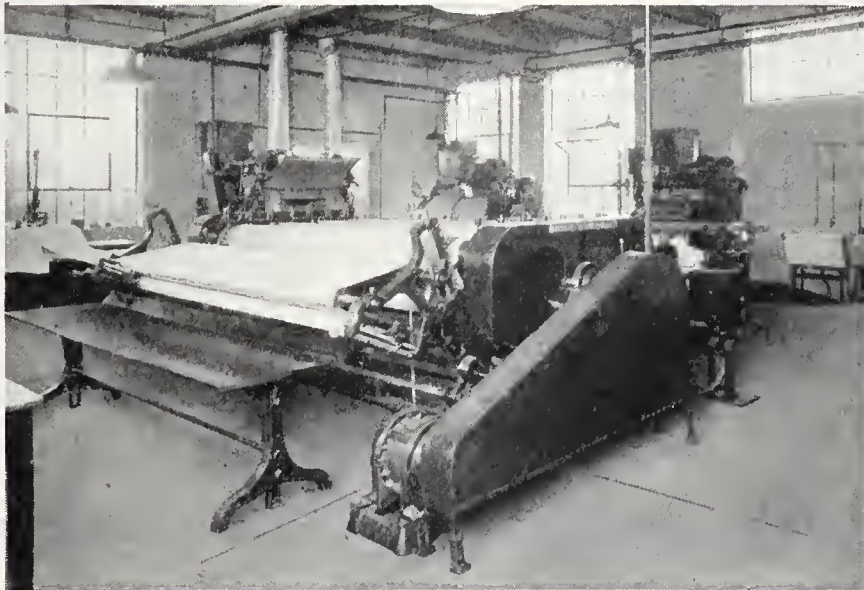




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## TRUTH ABOUT MEDICINES

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(Continued on Page 36)

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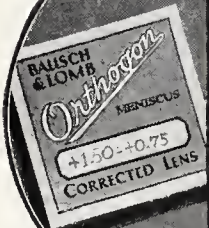
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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXXII

JANUARY, 1930

No. 1

## INTESTINAL OBSTRUCTION\*

### SOME MEDICAL ASPECTS

By V. R. MASON, M. D.

Los Angeles

DISCUSSION by Charles D. Lockwood, M. D., Pasadena; William J. Kerr, M. D., San Francisco; Lovell Langstroth, M. D., San Francisco.

THE symptoms and physical signs which develop after an acute obstruction of the bowel are familiar to all physicians. By careful deductions it is usually possible to predicate the approximate point of the obstruction, the presence or absence of asphyxia of the bowel and, in many instances, the cause of the obstruction. Nevertheless the mortality rate, in general, remains far too high. An analysis of the records of more than one hundred patients operated upon for obstruction of the bowel at the Los Angeles General Hospital during the past year has demonstrated anew that the delay between the onset of symptoms and the appearance of unmistakable signs of grave shock and toxemia is responsible for the greater number of deaths.

### FACTORS CAUSING DELAY

The factors which produce this delay are numerous, but due to their importance will be enumerated in their order of frequency:

1. Much time is often lost applying simple remedies, such as enemata, lavages and hot stupes, in the hope of relieving "gas."

2. In instances of pyloric obstruction from ulcer, faith in pills, powders, and diets not infrequently leads to unwarranted delay of operation.

3. In the more acute cases of small bowel obstruction valuable time is frequently lost awaiting the results of laboratory procedures or gastrointestinal radiographs or consultants' opinions.

4. Frequently the patient cannot be made aware of the seriousness of his condition before the progressing toxemia has made operation hazardous.

5. The abuse of sedative drugs has played a minimal part in causing delay in this series of patients.

Many of these causes of delay are beyond the

control of the physician. A number, however, might have been prevented. In very few acute conditions is clinical judgment so important and laboratory studies so unimportant. A flat radiograph of the abdomen in the upright and possibly in the horizontal position, blood counts and an examination of the urine should be made at once and the results should be obtained without occasioning appreciable delay. Blood should be withdrawn for chemical analysis, but operation should not be postponed on this account. Although the results of blood chemistry determinations are quite characteristic, their importance in diagnosis in the early stages of bowel obstruction is likely to be exaggerated. Later, in the progress of the condition these results are of much value, for they give an adequate idea of the severity of the toxemia and, in addition, point to a rational therapy. Since the administration of physiological or hypertonic salt solution should be a routine procedure in all instances of suspected obstruction of the bowel the results of blood chemistry determinations should not be awaited at the expense of earlier operation.

### CLINICAL SYNDROME IN BOWEL OBSTRUCTION

The exact cause of the clinical syndrome presented by patients with obstruction of the bowel is not completely known. Earlier work<sup>1</sup> emphasized the importance of the absorption of toxic material, either sterile or contaminated, from the bowel above the point of obstruction. This hypothetical toxic material was of unknown origin and composition, and proof of its absorption from the bowel is still lacking. It is possible that toxic material is formed in an obstructed bowel with damaged mucosa or, indeed, in a normal bowel, but it has been impossible to prove that absorption of such material through the bowel wall is frequently a cause of symptoms or disease.

Later observers have given their attention to the loss of digestive and intestinal fluid, inanition, dehydration, and the profound alterations of the physical and chemical equilibria in the body. They have also reemphasized the differences between simple obstruction and obstruction with asphyxiated areas of bowel. In the former instance the toxemia is less severe and life may be prolonged for a greater period of time than in the latter. In dogs with simple obstruction *properly treated*, death seems to depend more on starvation than on toxemia.<sup>2</sup> With asphyxiated bowel, or any

\* Read before the General Surgery Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.

Table Giving Data from Twenty-five Cases of Intestinal Obstruction

Name	Number	Age	Duration of Acute Symptoms	Amount of Vomiting	URINE			W. B. C.	Temperature	BLOOD			Point of Obstruction	REMARKS	RESULT
					Albumin in	Casts	Reaction			N. P. N.	CO <sub>2</sub>	NaCl			
J. C.	18818	24	12 hrs.	2+	3+	0	alk	14,200	99 <sup>4</sup>		47	429	Jejunum	Bowel viable	Cured
H. D.	44970	38	5 da.	4+	1+	0	ac	6,000	103°	33	67	231		Vomiting and diarrhea	Not operated
M. A.	27445	56	48 hrs.	4+	0	0	ac	22,000			62	346	Ilium	Cyanotic bowel not resected	Cured
Wm. W.	48704	81	12 hrs.	1+	0	0	alk		99		61	330	Ilium	Bowel not cyanotic	Cured
V. S.	45071	68	5 da.	4+	2+	0	ac	15,400	98	42	32	396	Ilium	Gangrene 6 cm. resected	Died
D. L.	47389	54	22 da.	2+	1+	0		10,100	100°		62	297	Ilium	Bowel cyanotic	Cured
F. G.	36762	38	5 da.	3+	1+	0	ac	8,600	98°			379	Ilium	Bowel good condition	Cured
A. J.	35086	40	35 da.	3+	0	0	ac	13,200	99 <sup>2</sup>		47.1	231	Ilium	Bowel viable	Cured
M. M.	29303	28	24 hrs.	1+	0	0		8,750	98 <sup>6</sup>	33	65	460	Ilium	Bowel viable	Cured
E. M.	28076	30	1 da.	1+	0	0	ac	18,800	99			412	Ilium	Bowel viable	Cured
A. F.	52189	69	1 da.	2+	1+	0	ac	18,100	97 <sup>2</sup>	41	61	448	Ilium	Bowel viable	Died
R. G.	53910	59	2 da.	1+	0	0			99		60	363	Ilium	Bowel viable	Died
L. D.	27896	38	2 da.	3+	0	0	alk	7,000	98°			363	Cecum	Adhesions released	Cured
G.B.H.	47730	54	21 da.	1+	0	0	ac	29,800	99	33	58	478	Colon	Resection, partial; colon	Died
R. C.	44427	57	3 da.	2+	0	0	ac	22,000	98°	35		371	Colon	Resection partial carcinoma	Died
G. N.	496	76	2 da.	3+	1+	0	ac	15,400	98		60	462	Sigmoid	Resection sigmoid	Died
J. A. H.	2812	46	14 da.	3+	0	0	alk	11,400	98°		63	363	Pylorus	Gastro-enterostomy	Cured
W. B.	49066	40	30 da.	3+	0	0	alk	7,800	98 <sup>8</sup>	42	65	360	Pylorus	Gastro-enterostomy	Cured
P. E.	46018	69	35 da.	3+	0	0	acid	8,500	97°	33	69	346	Pylorus	Not operated	
G. H.	37781	52	180 da.	1+	0	0	alk		98°	33	58	378	Pylorus	Gastro-enterostomy	Died
R. M.	48398	64	14 da.	3+	0	0	alk	7,200	98°	85	77	330	Pylorus	Gastro-enterostomy	Died
A. G.	5171	50	21 da.	3+	0	0	ac	10,050	99°			462	Pylorus	Gastro-enterostomy	Died
R. M.	27181	39	14 da.	3+	1+	0	ac	6,000	99 <sup>2</sup>	63		330	Pylorus	Gastro-enterostomy	Cured
J. C.	4528	44	21 da.	3+	0	0	alk		98°		63	460	Pylorus	Gastro-enterostomy	Cured
M.		40	30 da.	3+	1+	0	alk		98°		112	600	Pylorus	Gastro-enterostomy	Died

\*N.P.N. as mgm. per 100 cc. whole blood; CO<sub>2</sub> as vol. per cent; Cl as mgm. NaCl per 100 cc. whole blood.

other necrotic tissue free in the peritoneal cavity, grave toxemia is added to alterations produced by simple obstruction.

The use of saline solution in the treatment of obstruction of the bowel was advocated by Hartwell and Hoguet<sup>3</sup> in 1912. Although they believed the relief of anhydremia was the important factor their work deserves much credit. Tileston and Comfort<sup>4</sup> two years later proved that the nonprotein nitrogen fraction of the blood was increased in obstruction. MacCallum<sup>5</sup> and his associates in 1920 showed that hypochloremia and alkalosis accompanied gastric tetany produced experimentally in dogs and that the symptoms could be relieved by the administration of saline solutions. Haden and Orr<sup>6</sup> in 1923 published their first report, and in a series of investigations have added much to the knowledge of the alterations produced by simple obstruction.

The known facts may be briefly stated as follows: At the onset of obstruction, fluid loss occurs by vomiting and probably by secretion into the bowel lumen. This may be accompanied by

the loss of as much as five grams of chlorids per liter of vomitus. As a rule the chlorid content of the blood falls rapidly. However, since the sodium content of the blood is decreased little, if at all, the resulting acid-base imbalance is partially compensated by the retention of CO<sub>2</sub>, leading to an alkali-excess type of alkalosis. When the CO<sub>2</sub> volume per cent reaches about eighty-five, tetanic symptoms become manifest, but even at this time the pH of the blood is little altered. Since sodium represents about 92 per cent of the fixed base and chlorid and CO<sub>2</sub> about 96 per cent of the total acid radicles of the body, alkalosis is inevitable in any chlorid loss not quickly restored. Furthermore, since "it is probable that the maintenance of a normal osmotic pressure is of more importance to life than the maintenance of a normal acid-base equilibrium," the loss of large quantities of osmotically active chlorid may be compensated by the retention of the less osmotically active nonprotein nitrogen substances in the blood although some increase in the urinary nitrogen excretion may indicate an abnormally high



body-protein metabolism. Certain alterations of minor importance also occur. The sodium and potassium content of the blood decrease but slightly. Calcium and magnesium are little changed and the quantity of sulphur and phosphorus is increased.

Complete water and electrolyte balances throughout the course of an intestinal obstruction are not available. In consequence, certain important data of great value are still lacking. The fate of the chlorids is not completely known, but observation of clinical cases makes it reasonable to assume that the loss of gastric contents by vomiting is chiefly responsible for the dehydration, increased viscosity of the blood, oliguria, and chloropenia. This explanation seems more likely when one considers that the same phenomena occur in cholera, in severe diarrhea, and in other states associated with vomiting and diarrhea. Brown, Eusterman, Hartman, and Rowntree believed that renal insufficiency might play a part in the toxemia. It seems more logical to assume that the retention of nonprotein nitrogen is compensatory to the chlorid loss. Furthermore, Blum<sup>7</sup> has shown that in certain types of nephritis loss of chlorids by vomiting or reductions of chlorid intake for therapeutic reasons will lead to greatly increased nonprotein nitrogen retention in the blood.

The changes encountered in intestinal obstruction: alkalosis, chloropenia, and retention of nonprotein nitrogen occur in many conditions associated with loss of gastric or intestinal juices and are not diagnostic of intestinal obstruction. Furthermore the toxemia of intestinal obstruction may be severe before these changes make their appearance and, as is well known, this is particularly true when the point of obstruction is high.

#### DATA FROM TWENTY-FIVE CASES

The important data from the records of twenty-five patients recently observed with various types of obstruction are summarized in the accompanying table. It will be noticed that a chloropenia was practically constant while important degrees of alkalosis or of nitrogen retention were seldom observed. The lowest blood chlorid occurred in a patient suspected at first of having an obstructed bowel but who recovered without operation. The highest chlorid content was observed in a patient with syphilis of the stomach in whom the pyloric obstruction was the indication for gastro-enterostomy. In this instance the patient vomited continuously, but the vomitus contained only traces of chlorids, yet the CO<sub>2</sub> content of the blood was above one hundred volume per cent for several days, and the patient was tetanic. These exceptional cases should call attention to the need of caution in formulating any hypothesis concerning the cause of toxemia and death in acute intestinal obstruction. Further studies of the acid-base balance, of the osmotic balance, and of the part played by anhydremia, inanition and toxemia may

easily explain the exceptional cases encountered in any large series.

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#### DISCUSSION

CHARLES D. LOCKWOOD, M. D. (65 North Madison Avenue, Pasadena).—My discussion will be limited to acute intestinal obstruction.

Little progress was made in the treatment of this condition up to five years ago, notwithstanding the great improvements in other fields of surgery. Since the epoch-making work of Orr and Haden (*Journal A. M. A.*, August 28, 1927), on blood chemistry in relation to acute intestinal obstruction, chief interest has centered in the toxemia associated with obstruction and a more rational basis has been found for treatment of this serious condition. The most fatal cases are those where obstruction occurs high up, and the toxins in the duodenum are most fatal. There has been much discussion as to the nature of these toxins, whether they are bacterial in origin, or protein bodies.

B. W. Williams of London, in the *Lancet* for April 1927, points out the importance of toxemia due to anaerobes in acute obstruction and peritonitis. The late symptoms of peritonitis are identical with those found in fatal cases of intestinal obstruction. Adynamic ileus is the result of peritonitis and the general manifestations of fatal cases of peritonitis are identical with those of the terminal stages of intestinal obstruction. The chief symptoms in common are rapid pulse, cyanosis, slight general icterus, and especially restlessness and a pathologically acute consciousness up to the very end. Williams points out (what was observed by Army surgeons) that these symptoms bear a striking resemblance to those observed in severe cases of gas gangrene. This led to investigations to determine the part played in acute obstruction by anaerobic organisms. The one most commonly found is *Bacillus welchii*. This organism is constantly present in the intestines and produces a very powerful toxin. The organism grows best in a slightly neutral medium such as is found in the duodenum. In acute obstruction and late peritonitis there is great proliferation of the *Bacillus welchii*.

Williams has been using an antitoxin prepared from this organism at St. Thomas Hospital in London for two and one-half years in acute obstruction and peritonitis associated with paralytic ileus. Only the most severe cases were treated. The series consisted of 256 consecutive and unselected cases, and there were only three deaths in the series. This is indeed a remarkable showing in a type of cases where the normal mortality is around 50 per cent.

This new knowledge together with that made available by Orr and Haden, in their experimental work on dogs, I believe has laid the foundation for a revolution in our treatment of acute intestinal obstruction. The salient facts in Orr and Haden's work are: first, the diminished chlorids in the blood; second, the increase in nonprotein nitrogen; and, third, increased CO<sub>2</sub> combining power of the blood. Orr also showed experimentally that a restoration of the normal chlor-



ids greatly prolonged the life of dogs with intestinal obstruction, and that jejunostomy hastened death. Dogs with intestinal obstruction live longer than those with a simple high jejunostomy. The life of dogs with high obstruction was greatly prolonged by the administration of chlorids. In view of this experimental evidence and the collected statistics in human beings, the value of jejunostomy in intestinal obstruction is of doubtful value. The mere opening of a loop of intestines in no way insures drainage. Peristalsis is essential for this process. The loops of obstructed and paralyzed bowel hang like wet rags over a rope, and only stripping of each individual loop will adequately empty the bowel of its toxic material.

This brings us to the consideration of a more thorough method of operating in early cases of obstruction. Dr. W. B. Holden of Portland, Oregon, advocates complete eventration of the acutely obstructed bowels, and the introduction of a large glass tube, secured in the bowel by a flange around which a catgut suture is tied. All obstructed loops are then quickly emptied by stripping between two fingers of the gloved and vaselined hand. He has reported a series of over one hundred cases in which the mortality has been reduced to 20 per cent in the early cases.

With all of the foregoing facts in our mind, let us outline the course to be followed by the surgeon in these acute cases of obstruction.

1. In cases diagnosed early and operated upon within twenty-four hours do not wait for blood chemistry examinations nor for x-ray findings. Open the abdomen through a lower mid-line incision and seek for the site of obstruction. If it is a band, a twist, or an intussusception that is easily relieved and the bowel is in active peristalsis, no more need be done. If there are many water-logged loops of bowel, eventrate on a hot towel, quickly empty them of their contents, restore them to the abdominal cavity and close without drainage. Either simultaneously with the operation or immediately following, give 2000 cubic centimeters of normal saline subcutaneously.

2. Cases which have been obstructed more than twenty-four hours are usually toxic. Immediate operation is often contraindicated. The surgeon is justified in taking time for a blood chemistry and restoration of the chlorids in the blood. To this end, while waiting the blood chemistry report, 500 cubic centimeters of three per cent normal salt solution should be administered by hypodermoclysis and the stomach washed out. In view of the results obtained by Williams in the use of the *Bacillus welchii* serum, if obtainable, its administration should be begun to counteract the effect of the toxins. Operation should not be performed until the chemical balance in the blood has been largely restored.

Immediate operation releasing the obstruction will only permit a lethal dose of the toxins to escape into the undamaged bowel, where it will be quickly absorbed. As soon as the blood chemistry approaches normal under the continued administration of salt solution, operation should be undertaken to remove the obstructing lesion or, if necessary, resect the gangrenous bowel. The success of operation in these advanced cases depends upon speed and accuracy, and provision should always be made for the escape of gases through a catheter introduced into the bowel above the site of obstruction in such a manner that it can be removed without reopening the wound.

The old dictum, operate immediately in acute intestinal obstruction, should no longer be followed unqualifiedly. Each case must be analyzed and the treatment adapted to the individual case. Already the beneficial effects of the new knowledge are being reflected in the mortality statistics.

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WILLIAM J. KERR, M. D. (University of California Medical School, San Francisco).—In the main, I am quite in accord with the views expressed by the author in this excellent paper on intestinal obstruction.

There is no doubt that many lives are lost because the condition is not recognized early enough and the necessary measures taken to give relief. As the author has stated, many of these factors seem to be beyond the control of the physician. However, it appears to me that if the medical profession would join in a campaign of education the sufferers would hesitate to use home remedies where the results may be of such a serious nature. Physicians also should be more familiar with the dangers of procrastination, particularly in the case of chronic ulcer at the pylorus, and should accept the well-established rule that intestinal obstruction is one of the conditions that demands surgical intervention. We are too free in the use of cathartics and morphin in cases of vomiting, distention, or pain in the abdomen. The latter should most certainly be withheld until after a definite diagnosis is established. The time lost in waiting for results of laboratory studies in many instances endangers the life of the patient. If we would be a little more careful to analyze the symptoms and the progression and to sit down by the bedside for a careful examination of the abdomen with an analysis of the location of the distention and pain and to observe peristaltic waves, we would more often arrive at a diagnosis of the condition and determine the location of the obstruction. Quite often a plain x-ray film of the whole abdomen may reveal more correctly the site of the obstruction. Very often I have found that all the tests that are done only tend to confuse us in our decision as to treatment.

Since in most cases of acute intestinal obstruction the cause is one which requires surgical intervention and the life of the individual depends upon the correction or relief of the obstruction before toxic symptoms have become advanced, we must work with all possible haste but with the greatest clinical judgment. If a large amount of fluid has been lost by vomiting, we can assume that the chlorids are also low and no harm could come from administration of large amounts of fluids and chlorids. The question as to whether the content of the bowel should be emptied and whether the segment of the bowel should be resected depends entirely upon conditions at the time. There is no doubt that removal of large quantities of fluid from a paralyzed or inactive bowel has been of great value in treatment. I have not personally had any experience with the use of antitoxins for *Bacillus welchii*. Doctor Lockwood, in his discussion of Doctor Mason's paper, calls attention to the group of late cases where there has been much loss of fluid and where alkalosis has developed. I quite agree with him that in such cases operation is extremely hazardous and that in this very case it may be more important to the patient to try to restore the fluids and the acid-base equilibrium with a replacement of the chlorids before any operative measures are attempted.

In closing, I should like to suggest that if we are to reduce the mortality in intestinal obstruction still further, we should attempt a program of education for the medical profession as well as for the public so that this condition may be early recognized and properly treated. Great success has come from treating the diabetic through proper instruction in impending coma. Since a great majority of the acute intestinal obstructions are complications occurring in those who have had previous abdominal or intestinal conditions, we are in a position to give them certain suggestions which may save hours and, therefore, many lives when such accidents develop. Furthermore, we may prevent the use of home remedies, which are a contributing cause of mortality in many cases.

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LOVELL LANGSTROTH, M. D. (490 Post Street, San Francisco).—Doctor Mason reviews briefly the best modern knowledge of the physiologic disturbances caused by intestinal obstruction and reports the results of its application in twenty-five cases. I can add no further interpretation or discussion.



## MEDICAL CARE OF PEPTIC ULCER\*

By HOWARD R. HARTMAN, M. D.

Rochester, Minnesota

A PEPTIC ulcer is a benign lesion of the stomach or duodenum. Perhaps it is secondary to a localized change in the wall of the viscus that in turn is followed by a digestive phenomenon evident at the site of the ulcer. The healthy stomach and duodenum have an inherent protective mechanism against autodigestion; this may be deranged by interference with the blood supply and consequent local structural change in the wall. At this point digestive phenomena may cause loss of tissue and the formation of an eroded, ulcerated lesion. This is purely a hypothesis that seems logical in the light of clinical observations and the study of laboratory data. Preliminary injury to the region where ulcer occurs can be produced experimentally by a host of detailed ways that can be considered in groups: (1) alteration of specific nervous function; (2) mechanical and chemical injury to the wall, directly or through the blood supply; and (3) attack on the wall by bacteria carried in the blood from a distant focus. Durante, after studying seventeen possible ways of producing ulcer experimentally, conducted a series of experiments on the nervous system of animals, and concluded: "Ulcer may be produced by any agent capable of damaging the sympathetic nervous system, as it is on the integrity of this system, which controls circulation, secretion and profound sensibility in the stomach, that the very life of the gastric cell may be said to depend. The theory of trophic ulcer must be taken in this sense." The manner in which strong psychic stimuli are capable of altering normal vasomotor control is known. Blushing is an example. How psychic stimuli affect not only gastric secretion and motility, but the secretion of other glands and organs also is known. This possible factor, the psychic state, requires consideration in the study of the etiology of ulcer. Furthermore, it seems to be an important factor in effecting a cure for ulcer.

Mann and Williams stated the belief that injury at the time of an experiment, and gastric digestion, lead to ulceration. Mann noted acute ulcers in cats and dogs after the suprarenal glands had been removed. Ulcers developed, also, when the pancreatic juices were excluded and the fluids that bathed the tissues were acid in reaction. These two instances are classical examples of a host of reported experiments that illustrate the chemical and the mechanical theory for the origin of ulcer. These theories are well enough established to have their influence on the medical treatment of ulcer.

Although bacteria in association with ulcer were noted in 1874, to Rosenow goes the credit of establishing the elective localization of bacteria. At The Mayo Clinic his principles are in

constant clinical application in the treatment of ulcers as well as of other infectious diseases. Reeves, by injection of gelatin into the arteries that supply the stomach, demonstrated end capillaries at the usual site of ulceration in the stomach and duodenum. This offers an anatomic basis for the localization of infected emboli at the usual site of ulceration.

The exponent of each hypothesis concerning the development of an ulcer can disprove that of his opponents by his data. I believe that an ulcer does not develop from a single process, but that a combination of events is required. It may be that a single insult from one or more of the possible causes will not produce a chronic ulcer, but that constant repetition of the offense will lead to the classical peptic ulcer. The term "peptic ulcer" implies digestion of protein material carried on by the pepsin of the stomach. Pepsin is active only in the presence of adequate free hydrochloric acid. If one can neutralize that acid in or out of the stomach, digestion by pepsin cannot take place. As a corollary, one would expect that an ulcer of the stomach or duodenum could not be active in the presence of anacidity. I have yet to be convinced of the contrary. One might argue that duodenal ulcer could arise because of digestion by pancreatic juice. Proof of this is lacking, and the contrary has been shown. Still, I am open to conviction. Eusterman, in an unpublished study, reviewed forty-three surgical cases in which persistent achlorhydria was present but in which an ulcer was discovered at operation. However, the surgeon reported that most of these ulcers were healed.

The foregoing remarks are prefatory. Medical treatment of ulcer must be directed against the several causative factors mentioned. Preferably, it should be carried out in a hospital where the patient is under daily observation and control. It is essential to begin the treatment with complete, or nearly complete, neutralization of the free hydrochloric acid, and cure depends on one's ability to hold the acids in check after a period of complete neutralization. It is possible to do this in properly selected cases, and in making the selection it is necessary to consider several matters: (1) the status of the ulcer; (2) complicating surgical conditions; (3) the social status of the patient; and (4) the native intelligence of the patient and his willingness to coöperate and carry on when not under supervision.

*The Status of the Ulcer.*—Mechanical defects in the digestive system must be dealt with mechanically. Obviously a scarred, contracted, pyloric outlet which is the result of repeated periods of exacerbation, healing and contraction, will not be enlarged by diet. The pain and hyperacidity might be controlled, but retention of gastric content as evidenced by vomiting of the retention type or by the finding of gastric residue on intubation, could not be relieved. The procedure in acute perforation of ulcer is not open to question. Chronic perforation demands operation if some mechanical irregularity results, although perforation temporarily cures the ulcer. Repeated

\* From the Department of Medicine, The Mayo Clinic, Rochester.

\* Read before the Nevada State Medical Association, Elko, September 27-28, 1929.



profuse hemorrhages preclude medical treatment: isolated or infrequently repeated hemorrhages do not. Operation does not guarantee freedom from hemorrhage. Uncomplicated gastric ulcers respond readily to medical treatment. However, unless the patient can be kept under observation for years, one hesitates to treat gastric lesions medically because of the fear of carcinoma being present in the ulcer, or because of the fear that it will develop. A duodenal ulcer practically never becomes malignant.

*Complicating Surgical Conditions.*—If such a condition as cholecystitis or appendicitis is discovered it demands primary attention. In the course of the operation for such a disorder, if the patient's condition warrants it a conservative operation for relief of the ulcer can be undertaken. However, the surgeon's experience should be sufficiently broad to enable him to decide that surgical and not medical care offers the best chance of cure. Frequently, visualization of an ulcer by roentgenologic methods, or at the operating table is too tempting to an ambitious surgeon. Many completely healed ulcers probably have led to needless gastro-enterostomy, pyloroplasty, excision, and resection of the stomach.

*Social Status of the Patient.*—No matter how carefully one starts a course of medical treatment, it must be completed to accomplish its purpose. If acidity is controlled by care of the patient in hospital and he is made symptom-free only to find that his resources are exhausted, and that he must return to his job with the section or road gang, he finds himself subject to those factors that led to the development of his ulcer and he has recurrence of symptoms. In such a case the treatment is not to be considered inadequate. However, the patient should not have been accepted as a subject for trial of the medical regimen. It would have been better for him to take the shorter, surgical route to health.

*Native Intelligence of the Patient and His Willingness to Coöperate When Not Under Supervision.*—It is discouraging to find a patient who demands food that pleases his taste in spite of its possible effect on his ulcer. It is hopeless to have some patient report that he does not like milk, and consequently to have him demand that something else be prescribed for him. The patient who says that he is starving, when the intake of calories is adequate and has been calculated for his needs, is not a suitable subject to undergo the medical regimen. And then it is disheartening to find that a patient who has followed your advice to the letter as long as you made daily calls, has disregarded your advice as to his future conduct, because he was feeling all right. In spite of all one may do, ulcers may recur; but the number of times that this happens is probably in direct proportion with violation of principles designated to prevent it.

#### OBJECTS OF MEDICAL TREATMENT

After the patient has been properly selected what is to be done? Needless to say, all the information regarding acidity, roentgenologic evi-

dence as to the kind of ulcer present, and the evidence concerning foci of infection in teeth, tonsils or prostate gland must be at hand. The first object of the treatment is to neutralize acidity. Gastric acidity is produced under the influence of the nervous system, the chemical nature of the food, and its physical properties. To my mind, the neurogenic theory of the stimulation of gastric glands to the production of hydrochloric acid is the most potent. Patients who have ulcer are all stimulated; they usually come from only one stratum of society, only from those who have ambition, and usually ambition greater than their physical endurance and nervous stability. Not infrequently they are passing through some nervous crisis at the time the ulcer develops and each added shock to the nervous system is reflected in an exacerbation. I had a friend, an influential stock broker, who made each customer's problems his problems. I knew this man to have an ulcer for years, and I observed that his gastric upsets were coincident with the depressions in the stock market. I have now on my service at the hospital a woman, aged thirty-three years, who is married to a man aged sixty years. The marriage took place ten years ago. The man has money. She says that she has had ten induced abortions each after gestation of three months, and she wears diamonds. Her husband is jealous, demands constant attention to his wants and infirmities, but cannot recognize symptoms in his wife. He has demanded her constant presence for ten years. The picture, I think, is clear. She has a chronic duodenal ulcer, with a crater.

There is no need to multiply illustrations. The cause of this strain may be very elusive; detailed search is often necessary to find it. Yet it is imperative to be able to discuss it with the patient, for, I think, by so doing you help him as much as by drugs and diet to get rid of his ulcer. I do not profess to be a psychiatrist or neurologist. Nevertheless, I feel that if one can gain the confidence of the patient, and by a subsequent hint can cause him to relate the tale of woe that in some way affects the nervous system, perhaps the sympathetic nervous system as suggested by Durante, one often can disclose one of the causes of ulcer and hyperacidity. A great deal of help for this jaded nervous system is to get the patient out of his environment. At home in bed, or in a hospital in his home town, the factors which are nervously irritating are too prevalent, even under the best of circumstances. That is why I think medical treatment for ulcer is most effective when the patient is in a strange place. As more specific treatment while in the hospital, the patients are given some sedative. Phenobarbital, gram 0.097 (grains  $1\frac{1}{2}$ ) once or twice a day, or perhaps bromids, or sodium iso-amylethyl barbituric acid, gram 0.097 (grains  $1\frac{1}{2}$ ) are beneficial. I feel certain that the neurogenic influence in ulcer prepares the soil for the inflammatory lesion that is called peptic ulcer. Certainly, correction of the



nervous condition as far as possible, is essential to cure, medical or surgical.

Now, assuming that the malfunctioning nervous system is understood and adjusted, the food chosen must be such as will reduce acidity. Certain foods have within themselves chemicals called secretagogues, which chemically irritate the gastric mucosa to produce free hydrochloric acid. Notorious among such foods are the red meats; to a less degree, other meats. The proteins of milk and eggs are practically free of secretagogues. Hence at first meats are eliminated from the diet and milk alone is used; later, eggs in suitable form are added. Another method by which free hydrochloric acid is produced is by mechanical irritation of the mucosa. Consequently in attempting to reduce the quantity of free hydrochloric acid rough foods are eliminated from the diet. Even when the patient is pursuing an ambulatory regimen, after dismissal from the hospital, foods that are necessary for maintenance of an adequate intake of salt and vitamins and for a balanced diet, but which are rough and fibrous, should be served in the form of purées. None of the food should be excessively hot.

#### TECHNIQUE OF THE TREATMENT

The method of feeding patients while they are in the hospital is as follows: 90 to 120 cubic centimeters (three to four ounces) of a mixture of milk and cream, 50 per cent of each, are given every hour from seven o'clock in the morning until nine o'clock in the evening, for seven days. In many patients, perhaps in most patients, such a diet alone is not adequate to keep the free hydrochloric acid neutralized. Consequently, alkalis are administered on the half hour, only in sufficient quantities to control the acidity, as determined by aspirations of the gastric content and its analysis. Aspirations are begun on the third or fourth day of treatment; the small Rehfuß tube is used. Occasionally alkalis can be omitted, and if so, so much the better, for all alkalis are known to have a tendency to produce alkalosis, except perhaps a few newer ones, if we can believe the claims of the manufacturers. The aim is to minimize the amount of alkali given and yet control the acidity. At the onset, one of two powders is given on the alternate half hours, as follows; number one is made of calcium carbonate gram 0.65 (grains 10) and bismuth gram 0.50 (grains 8); number two, of calcium carbonate gram 0.65 (grains 10) and magnesium oxid gram 0.85 (grains 13). The magnesium has a secondary value in helping to overcome the constipation that is secondary to a concentrated diet. This amount of alkali is often found to be in excess of the patient's needs; occasionally more is required. If it becomes necessary to exhaust all means known to neutralize the acidity a poor outcome can be predicted whether medical or any other treatment is used. In difficult cases, especially when aspiration of gastric content reveals hyperacidity and hypersecretion, belladonna given in divided doses until the physiologic effect is obtained is of great assistance. In neurotic patients who have pylorospasm belladonna has no

equal. Doses of ten to fifteen drops three times a day are used. Blonde persons do not tolerate belladonna as well as do swarthy persons. Constipation is to be avoided; any one of the many preparations of mineral oil, with agar, can be given with advantage to action of the bowels and without bad effects on the ulcer; in fact, I think it helps healing of the ulcer.

All feedings end at nine o'clock in the evening and are not resumed until seven o'clock in the morning. These ten hours without food occasionally lead to secretion of acid, with symptoms. The symptoms call for nocturnal intubations that reveal the acidity, the neutralization of which brings relief. Rather than to let the patient wait for the development of symptoms before neutralization is attempted day or night, it is best to anticipate the symptoms and to neutralize the acid before it has accumulated in sufficient amounts to produce symptoms; consequently, when distress at night is once reported, the patients are given feedings and powders at night. Usually feedings at intervals of two hours during the night are more than adequate, and often one or two feedings are found to suffice. Except in stubborn cases, four to six nights are usually all that are required for training the stomach to be at rest during the sleeping hours.

Medicines and diet cannot overcome irregularities in conduct; coöperation is what cures ulcers. It is a tragedy to most patients who have ulcer to ask them to stop the use of tobacco. Nevertheless it must be done. Tobacco does not cause ulcer any more than meat causes ulcer; yet tobacco has a tendency to increase gastric secretion and acidity. An old German friend of mine once said, "A big meal is a fine thing because you can smoke so much better afterwards." The large meal created a need for more gastric juice, and the tobacco supplied the stimulus. More scientific proof of the effects of tobacco on gastric digestion was demonstrated by one of our laboratory physicians who had an ulcer. He pooh-poohed the idea that smoking was detrimental until he experimented on himself. With a small Rehfuß tube in place, he studied his gastric contents while he was using tobacco and while he was not using it. He found that he could cause an increase in the acidity of his gastric content to various levels, depending on the number of cigarettes he smoked.

Alkalis are given every hour until the end of the three weeks of hospitalization, unless toxic symptoms develop. There is danger of giving alkalis to excess and of producing certain prodromal symptoms which become accentuated into definite symptomatic reactions corresponding with the changing chemistry of the blood. These symptoms can be increased even to the point of tetanic convulsions unless the administration of alkalis is materially reduced or stopped. Rivers reported at length on observations relative to alkalosis. Since we have recognized this condition at the Clinic we have not seen a typical case of alkalosis develop under treatment, not only because we have learned that we can administer smaller



amounts of alkalis than usually are prescribed and still bring about neutralization of the acids, but also because we have learned to recognize those prodromal symptoms which tell the physician that the condition of the patient is bordering on intoxication. One of these symptoms is aversion to milk. The patient complains that the milk is too rich or has too much the "taste of a cow." This is associated with a little nausea and a headache of low grade. In the more severe forms, the nausea assumes the proportions of vomiting, and the headaches become worse. Should these symptoms not be recognized and the treatment be persisted in, prostration, with profuse perspiration, develops; at this time, if not before, one finds that there is an elevation in the blood urea and in the carbon dioxid combining power of the blood, with diminution of the chlorids. I have not found it necessary to analyze the blood for this altered chemistry, because, at the first sign of intoxication, that is, aversion to milk and a little headache, administration of all alkalis is stopped. Usually the order is given that administration of milk be interrupted and that the patient be given a soft diet. Fruit juice, preferably orange juice, is given in doses of four ounces every few hours if necessary. From twenty-four to forty-eight hours of such treatment makes it possible, in many cases, to resume the previous treatment and to continue it without interruption. Occasionally, however, it is not possible to carry on the treatment to its completion because the patient is intolerant of the alkalis and the diet.

In the second week the patient's diet is increased a little. Milk soups, gelatin, cooked cereals, with cream, custards, and the like, are served three times a day. The feedings of milk and the alkalis are kept up on the half-hourly basis.

During the third week the diet is materially enlarged. Practically only those foods that either by chemical or mechanical action stimulate gastric acidity are eliminated, and during this third week of hospitalization the patient continues the half-hourly feedings of alkalis and milk. If the patient has lost weight during the early period of the treatment, the lost weight is regained by this forced diet, in which the intake usually is in excess of the 2000 calories a day. On dismissal from the hospital the patient is admonished not to depart from instructions because of the penalty of an exacerbation of the ulcer. His meals are patterned after the third week diet with sufficient calories for an ambulatory life. Milk is taken only midway between the three regular meals. He is cautioned as to his environment and mental and physical strains, principally the former. He is urged not to revert to the use of tobacco, to abstain from condiments, to take at least six alkaline powders a day, one an hour before and one an hour after meals, to be certain of adequate hours of rest, and to follow this regimen for a period of six months. At the end of six months, a report usually is requested.

All foci of infection should be eradicated. This declaration is based on experimental research.

Infected teeth and tonsils should be removed and occasionally prostatic massage is indicated. Many times the judgment as to what is an infected tooth plays an important part in bringing about a cure. According to the interpretation of the dental roentgenographic film, which is applied by my associates and me, any dead tooth or any tooth with a devitalized root is infected, irrespective of whether bacterial action has gone on to rarefaction of the bone that is evident roentgenographically. Eradication of foci usually is begun in the second or third week of treatment in hospital.

The contraindications to medical treatment of ulcer are few. Patients with nephritis, of course, do not tolerate well the alkaline treatment, and the same is true of persons who are suffering from so-called essential hypertension. Elderly persons do not withstand vigorous alkalization. Under such circumstances one must temper the treatment according to the complicating factors, but as a rule all persons who are suitable subjects stand the treatment very well. Experience at the Clinic has led us to believe that if, in the first few weeks of treatment, a patient makes prompt symptomatic response, and if the chemical analysis of the gastric content shows that the acids are easily controlled, the prognosis is good whether the medical regimen is continued or whether operation is performed.

#### SUMMARY

Active peptic ulcer probably is caused by multiple factors. Experimental data offer theoretical explanations of the causes of ulcer in the human being, namely: neurogenic influences, traumatic influences, and occult foci of infection. The activity of an ulcer seems to depend on the degree of free hydrochloric acid present. An active ulcer cannot exist in the presence of anacidity. Non-surgical relief is possible by removing the inciting factors as completely as possible and by neutralizing, with a suitable diet and alkalis, the acid that is formed in spite of means to reduce secretion. The diet prescribed is free from chemical, thermal, and mechanical irritating factors. Cooperation and good general conduct of the patient, together with continuance of a suitable diet and medication after leaving the hospital, for a period of months, are of vital importance in the ultimate cure. Of equal importance is removal of occult foci of infection.

The Mayo Clinic.

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## PULMONARY TUBERCULOSIS\*

THE IMPORTANCE OF THE CLINICAL HISTORY  
IN ITS DIAGNOSIS

By F. M. POTTENGER, M. D.

Monrovia

DISCUSSION by Philip H. Pierson, M. D., San Francisco;  
William C. Foorsanger, M. D., San Francisco; A. L.  
Bramkamp, M. D., Banning.

EARLY tuberculosis is a curable disease. This is true both of the insidious type and of the type with acute onset. The detail in the method of treating early cases of the insidious type must necessarily differ from that instituted in treating the more acute types. While they cannot all be successfully treated by the same method, yet modern medicine has devised ways by which nearly all of the early limited lesions can be brought to a satisfactory issue, whether the onset be insidious or acute.

Such favorable results, however, can only be attained regularly by the prompt institution of the proper remedial measures before extensive destruction of lung tissue has taken place, and before serious inroads have been made on the patient's resistance; and further, before healing is complicated by insurmountable mechanical problems.

UNDERLYING BASIS FOR CURE IN  
TUBERCULOSIS

Early diagnosis and immediate adequate treatment is the only procedure which can make tuberculosis a curable disease in the great majority of instances. Delay, while it does not necessarily produce a hopeless condition, as was formerly believed, is nevertheless the one greatest factor which stands between the tuberculous patient and a life of usefulness. This fact must be emphasized until it always stands uppermost in the minds of the doctor and the patient when a diagnosis of early tuberculosis has been made.

The diagnosis of tuberculosis in instances of frank disease is comparatively easy. The knowledge possessed by the well-trained practitioner should be sufficient. It is only in the difficult cases that there should be much doubt.

Many practitioners do not have sufficient experience to become expert in the diagnosis of difficult cases. These will require the opinion of specialists. But careful history taking, as I shall attempt to show in this paper, with analysis of the elicited symptoms, will make the diagnosis fairly certain in nearly all instances of frank disease, and will make the diagnosis probable in a very large percentage of positive border-line cases.

Probably 80 per cent of cases of early clinical tuberculosis can be placed in the class of "probably" or "definitely tuberculous" by the analysis of a carefully taken clinical history alone. This statement is made in face of the fact that

tuberculosis does not make itself known in any set way.

The disease, when it becomes sufficiently pronounced to be a clinical entity, is recognized by the fact that it causes disturbances in the body's normal physiologic activity. The clinical history should reveal its course from the time that symptoms first manifest themselves up to and including the time of examination.

## SYMPTOMS AND THEIR CAUSES

In order to appreciate the nature of symptoms in tuberculosis one must understand what takes place from the time of infection until clinical disease manifests itself.

Tuberculosis differs from the acute infectious diseases in that the latter, as a rule, consist of one single episode of infection and immunity response, while tuberculosis consists of many such episodes. In the acute infections the patient either dies or develops a more or less lasting immunity to the causative microorganism. A succeeding infection of the same nature is occasionally met, but only rarely. In tuberculosis, on the other hand, the whole clinical course of the chronic disease consists of repetitions of bacillary inoculations and immunity responses with the production of never more than a relative immunity.

In chronic tuberculosis, reinoculations occur in an immunized host and therefore differ from the primary infection. The host being already immunized by previous infection, the immunity response to the reinoculations does not await the usual prodromal stage (which is the period necessary to bring the host's immunizing mechanism into play) but starts at once. If a sufficient number of bacilli engage in the reinoculation, an inflammatory reaction of varying severity depending upon the degree of allergy present is immediately called forth, by which toxins are set free, and pulmonary nerves and local cells are at once irritated, producing disturbances in the host's physiologic equilibrium. These departures from normal physiologic action are recognized as symptoms of tuberculosis. Not only do the symptoms appear sooner, but they are apt to be more pronounced than those due to a primary inoculation, caused by equal numbers of bacilli.

The immediate reaction of the host to primary infection is mild and symptomless. Cells proliferate and attempt to wall the bacilli in, forming tubercles; but there is no general widespread body reaction until multiplication of bacilli with the elaboration and dissemination of tuberculo-protein into the tissues has taken place, and the specific defensive forces of the host have been thereby aroused.

If the numbers of bacilli engaged in reinoculation are few, the reaction will be mild and may be symptomless; but if the numbers engaged in the process are sufficiently large, then recognizable

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TABLE 1.—*Etiological Classification of Symptoms of Pulmonary Tuberculosis*

Group 1 Symptoms Due to Toxemia and Other Causes Acting Generally	Group 2 Symptoms Due to Reflex Cause	Group 3 Symptoms Due to the Tubercu- losis Process per se
Malaise Lack of endurance Loss of strength Nerve instability Digestive disturbances (hypomo- tility and hyposcretion) Metabolic disturbances resulting in loss of weight Increased pulse rate Night sweats Temperature Blood changes	Hoarseness Tickling in larynx Cough Digestive disturbances (hypermo- tility and hypersecretion) which may result in loss of weight Circulatory disturbances Chest and shoulder pains Flushing of face Spasm of muscles of shoulder girdle Diminished motion of affected side	Frequent and protracted colds (tu- berculous bronchitis) Spitting of blood Pleurisy (tuberculosis of pleura) Sputum

symptoms of disease appear within a few hours after the infection has taken place.

ALLERGY IN TUBERCULOSIS

Allergy produces its effects on the host in the following ways: (1) it hastens the elaboration of tuberculoprotein in the focus of infection; (2) it results in the death of both bacilli and tissue cells; (3) through its inflammatory effect on the nerve endings in the tissues it causes reflex symptoms to appear in other tissues and organs; and (4) acting locally, it produces certain recognizable effects in the tissues which are the seat of the lesion.

THREE GROUPS OF SYMPTOMS PRODUCED

These modes of action produce three groups of symptoms, each group having a distinct etiologic cause. The first two produce the toxic group; the third, the reflex group; and the fourth, the local group or those caused by the tuberculous process *per se*. I first proposed this grouping of symptoms in 1913 and have used it continuously in my practice since. I find it very helpful in that it explains what is going on within the lung. It also proves very helpful in differentiating difficult border-line cases.

The important symptoms so grouped appear in Table 1.

ADVANTAGES OF PROPOSED GROUPING

Two important advantages of considering symptoms according to this grouping are: first, that of showing what it is that is operating to disturb the patient's well-being; and, second, through what agencies such disturbance takes place. The allergic inflammatory reaction is responsible for the production of the symptoms in each group.

Nerves, endocrines, electrolytes and cells generally are structures through which the agents act in the production of the symptoms of the toxic group, because they are caused by circulating toxins acting generally throughout the body.

Afferent and efferent nerves and the tissues in the limited area which come under the influence of the efferent impulses cause the reflex group.

The allergic inflammation acting directly on the tissues is responsible for the symptoms of Group 3.

It is evident that the symptoms which indicate the presence of tuberculous disease vary with the dose of bacilli responsible for the reinoculation, the amount of tuberculoprotein which gains access to the circulating blood, the reacting capacity of the patient, and the manner in which the disease progresses thereafter. It is also evident that different degrees of sensitization of body cells result from similar inoculations in different individuals because of the different reacting qualities which are manifested by individuals possessing different cellular reactions.

While bacilli have no power of locomotion within themselves, yet so long as avenues of escape remain for bacilli which are contained within active tuberculous foci, they will gain access to adjacent tissues and through the lymph and blood and natural channels be carried out into other tissues. If the numbers of migrating bacilli are few, and the amount of bacillary protein gaining access to the body fluids is small, reinoculations may take place at frequent intervals without causing any recognizable symptoms; for while they stimulate and act upon the immunizing mechanism qualitatively, the same as large doses of bacilli, or larger quantities of tuberculoprotein, they produce a scarcely perceptible effect quantitatively. The resulting allergic reaction may be so slight as to be microscopic and so, of course, produce no recognizable symptoms; or, it may be more marked and still not be discernible; or, it may be so severe as to precipitate a marked defensive response on the part of the host with a toxic syndrome comparable to that which accompanies the acute infections. In fact, such a reinoculation is accompanied by the same episode of immunity response as characterizes such diseases as diphtheria, scarlet fever or measles.

Again bacillus bearing discharges which are cast off into such natural channels as the bronchi may plug the same and thus cause a retention of bacilli *in situ* until they have initiated an infection. Such an infection as a rule would produce an abrupt onset of symptoms. We do not believe this occurs often in the beginning of pulmonary disease except following the rupture of a caseating bronchial gland, yet we must accept it as not an uncommon possibility in the extensions which



take place from pulmonary foci to unaffected tissue during the course of advanced tuberculosis.

There is probably a period in all early active tuberculous infections, either before or after they have made themselves known by frank symptoms, when bacilli are carried in minimal numbers through the body fluids from existing foci to new tissues, and when tuberculo-protein circulates in the body fluids in minute quantities. The resulting reaction may be so slight that it produces no recognizable disturbances in the physiologic equilibrium of the host. No doubt, many borderline cases which react markedly and quickly to the cutaneous and intradermal application of tuberculin in the presence of indefinite and inconclusive symptoms and thus puzzle the examiner in forming a conclusion as to whether or not active tuberculosis is present, belong to this class. They are potentially tuberculous but may not become actually clinically ill unless larger reinoculations take place. A clinical history in such cases is not conclusive. Further evidence must be found on which to base a diagnosis.

Frequently repeated reinoculations, too, may be caused by larger numbers of bacilli; and, larger quantities of tuberculo-protein may escape from existing foci, and still the reaction not come within the domain of distinct acute inflammation with its marked toxic and reflex symptoms, such as characterize the acute infections. The patient may have a slight elevation of temperature, a loss of vigor, fatigue, possibly lack of appetite and loss of a few pounds in weight, yet be unable to point to a definite episode of immunity reaction such as would characterize an acute allergic response.

The pathology in these cases consists of slight inflammatory phenomena, but so slight that they may be detected only with difficulty by the usual procedures of physical examination, or by the x-ray, except after a tuberculin reaction of sufficient magnitude to change the mild allergic reaction of a predominantly proliferative character to one of a predominantly exudative (parenchymatous) character.

Tuberculosis of this type in an active form may be present for quite a period of time before it causes sufficient symptoms to make a diagnosis definite; in fact, may heal before causing sufficient symptoms to make the diagnosis definite.

On the other hand, when tuberculosis shows itself as a frank disease, with a marked immunity response accompanied by an acute toxic reaction there nearly always will be reflex phenomena present, and often, too, evidence of the local reaction of the disease in the tissues such as sputum, a pleural involvement or an hemoptysis, to make the diagnosis quite evident.

It is necessary for the profession to know that the disease may come on insidiously with small reinoculations and no frank symptoms, or abruptly with acute toxic manifestations, for

much of the teaching in the past has not taken this sufficiently into consideration.

It is very desirable but quite impossible to assign definite values to the different symptoms. This is impossible because different people react differently to the same stimulus; and, further because different organs in the same individual may show differences in their response; and, still further, because the reinoculating doses of bacilli are variable in size and virulence.

#### DIAGNOSTIC VALUE OF SYMPTOM GROUPS

The three groups of symptoms vary greatly in their diagnostic value. The toxic or general group is characterized by the fact that it represents harmful influences which affect structures throughout the body; nerves, endocrine glands, and body cells. The symptoms which accompany the acute reaction following a reinoculation with fairly large quantities of bacilli, is qualitatively the same as that which follows reinoculations of milder degree, and similar to the symptoms which accompany neurasthenic and psychasthenic states or conditions of hypo- or hyperactivity in certain endocrine glands, such as the thyroid, gonads and adrenals; but they differ in severity. Nor does the acutely toxic state in tuberculosis differ in symptomatology from the acutely toxic state in other infections; so there is nothing significant or of differential diagnostic import in the symptoms of Group 1. They must be combined with symptoms of Groups 2 and 3 to possess diagnostic worth. They only show that some factor or factors are producing a widespread injury to the body tissues and functions.

Symptoms belonging to the reflex group, on the other hand, possess considerable diagnostic value, even on their own account. Irritation of the larynx, hoarseness and cough are one or all usually present in early clinical tuberculosis, but they do not possess so great localizing worth as the reflex spasticity which involves the skeletal muscles; for the cough reflex may be produced by stimuli arising in many tissues other than pulmonary. The value of the reflex symptoms is greatly increased by the fact that some symptoms of Groups 1 and 3 are nearly always present at the same time, or, if not present, there is a history of their presence in the near past; and the combination of the symptoms of the two or three groups is decidedly more suggestive than those of one group alone.

When the lung is the seat of allergic reaction, as it always is in active pulmonary tuberculosis, stimuli are carried to the central nervous system over the visceral nerves; and transferred to those muscles which receive their innervation from the midcervical segments of the cord, causing them to show reflex spasticity. This may be detected as an increased tension and as an uneven contraction of the muscle bundles on palpation, and may also be inferred from the lessened motion of the hemothorax corresponding to the lesion if it is

one-sided, or, from the detectable asymmetrical movements when both sides are involved. Lagging thus when properly evaluated becomes an important sign of active pulmonary inflammation.

The structures involved are the sternocleidomastoideus, scalmi, pectorales, subclavii, trapezii, levator anguli scapulae and rhomboidei muscles, and the crura and central tendon of the diaphragm.

This spasticity and the effects which it exerts is of the greatest diagnostic worth and when combined with subjective symptoms of a reflex or toxic nature immediately fixes attention upon the lung because of its definite localizing nature.

Flushing of the face is also of value, but we rarely see it as one of the early symptoms. It is more apt to appear after the lung has been the seat of disease for some time.

The symptoms of Group 3 are of the greatest diagnostic import. They are subjective symptoms about which the patient will tell you. They have no more direct localizing value than the spasticity of the muscles, but they are complained of while the latter must be detected by the examiner.

Pleurisy, hemoptysis and scanty sputum are commonly present in early or fairly early tuberculous lesions. If the sputum contains bacilli, the diagnosis is made; but it is sometimes present in small amounts in early lesions without bacilli being found in it after most careful search.

Hemoptysis may be met in influenza, and post-influenzal infection, bronchiectasis, lung abscess, lung syphilis and malignancies; but the history will usually suggest whether or not these other conditions are present. If symptoms of both Groups 1 and 2 are present with an hemoptysis of one-half to one dram of bright blood, it points most strongly to tuberculosis as the causative factor, and at least calls for a longer observation and a carefully directed plan of living.

Pleurisy, except it accompany influenza, pneumonia, or an injury to the chest, is nearly always due to tuberculous infection.

#### SUMMARY

With the understanding that there is only one etiologic factor responsible for the symptoms of early clinical tuberculosis, viz., the allergic reaction; and with the further knowledge that this causes the symptoms in one of three ways, through toxins, reflexly, or locally at the point of the inflammation, we are now able to see the combined value of symptoms of at least two or of all three groups in fixing the diagnosis of a given pulmonary infection.

Since the allergic reaction is also responsible for the evidence found on physical examination and that revealed by the x-ray, it may be seen that the reaction which causes few symptoms is also likely to cause few signs which are demonstrable on physical and x-ray examination. It is in such cases that we need help from all the

diagnostic methods that we have at our command. This paper is not intended to belittle other methods of examination, but simply to call attention to and to emphasize the importance of a clinical history, when accurately taken and carefully analyzed.

Pottenger Sanatorium.

#### DISCUSSION

PHILIP H. PIERSON, M.D. (490 Post Street, San Francisco).—This paper dealing with the clinical history in the diagnosis of pulmonary tuberculosis is very timely. Today when there are so many shortcuts to diagnosis by means of laboratory aids, the careful taking of the history is often neglected. It has been my custom to ask the patient how long ago he was *perfectly well, active and strong* and chronologically put down the symptoms as they have occurred, very often over several years. One of the most important groups of allergic phenomena is the gastro-intestinal group mentioned under one and two. Often suggestive of chronic disturbance of the gall bladder, appendix, or colon, much time is lost in treating the patient for an illness which is not really responsible for his complaint. Likewise the histories of frequent colds are merely allergic reactions about a pulmonary or bronchial focus. This is particularly true in childhood. Among other helpful aids in determining their sensitiveness of tuberculosis is the intracutaneous tuberculosis test. This reaction is often more marked at one time than another. Serial roentgenograms frequently bear out this changing reaction about a pulmonary focus.

In group two, Doctor Pottenger has mentioned spasm of muscles of the shoulder girdle as a reflex manifestation of trouble in the lungs. In early tuberculosis, especially in the face of hemorrhage where a thorough examination is impossible, I am sure we can gain much from palpating the chest to determine lagging of one or the other side and this reflex spasticity of the muscles reflecting the underlying disease. To be sure it takes a good deal of experience to properly interpret this sign, but I feel that it is well worth special attention in order that we may be acquainted with it accurately when it is most needed. The old adage, treat the patient and the disease will get well, is particularly true in tuberculosis and the recognition of the many allergic phenomena, as expressed by Doctor Pottenger, will help in choosing the proper system of treatment for tuberculosis.

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WILLIAM C. VOORSANGER, M.D. (490 Post Street, San Francisco).—The diagnosis of beginning tuberculosis depends largely upon symptoms elicited, gathered only by careful questioning of the patient. As the doctor so well states, our hope for cure lies in starting remedial measures before the tuberculous process has made too great inroads into the lungs. The specialist, too, seldom sees the beginning disease—too often, sad to relate, the patient comes to him with advanced tuberculosis which has remained undiagnosed. Careful history-taking will often elicit a slight cough of months' duration, pains in the chest, a pneumonia or influenza in previous years, a steadily growing loss of appetite, an occasional night sweat—but, most important of all, a definite statement of fatigability of which the patient himself may have been ignorant until it is called to his attention. While these symptoms do not always indicate tuberculosis, they are highly suggestive of it, and if kept in mind, will lead the physician to make a complete examination, with sputum analysis and x-ray investigation.

Without a careful history, and without properly evaluating elicited facts, the patient is often dismissed with a little advice or a cough mixture and thus permitted to lose his chance of getting well. I agree



fully with Doctor Pottenger concerning repetitions of bacillary inoculations in tuberculosis and that we only accomplish a relative immunity. Regarding the primary infection, we have learned that it does not always start in the apex as formerly believed; it starts most often infraclavicularly, and an early lesion may thus be overlooked by the ordinary physical examination.

Doctor Pottenger's grouping of symptoms is excellent; you will notice the most distressing ones are due to toxemia, which can only be combated by rest in bed. How necessary, therefore, to make an early diagnosis and get our patients at rest!

Time will not permit lengthy discussion of the statement that the allergic reaction is the main etiological factor in pulmonary tuberculosis. We are beginning to recognize this fact in other diseases, and particularly in other pulmonary conditions; perhaps it explains why we have so often failed to effect a cure in one patient while accomplishing it in another. It is certainly a true and important statement, if reactions in the human body can cause mild symptoms in one person, and severe ones in another, it surely becomes self-evident that a careful eliciting of all facts which can have a bearing upon an early diagnosis is a matter of the first importance.



A. L. BRAMKAMP, M.D. (Banning).—For many years, in season and out of season, Doctor Pottenger has been preaching to medical men this gospel of the curability of pulmonary tuberculosis based on early diagnosis and treatment.

On the whole it may be accepted as a fact that doctors generally are now somewhat better able to recognize the clinical disease from physical signs than formerly if serious and persistent effort is made. However, in many cases, the disease will have done considerable damage in the lungs by the time physical signs are readily detectable. We need to be "tuberculosis minded," always alert to the possibility of its existence even in the apparently well or slightly indisposed.

While it is true that other diseases are accompanied by many of the symptoms of pulmonary tuberculosis of the toxemia group, if the toxemic symptoms in a particular case are accompanied also by those of the reflex and focal groups the evidence is so compelling that we should consider the case one of tuberculosis until some other fully adequate explanation is found.

Just as in years past, moderately or far-advanced cases form the great majority of patients in sanatoria. Many of these patients have had relatively early diagnosis and therefore are perhaps themselves responsible for their failure to recover. Since the change to the present hopeful attitude as to the curability of the disease, there is lessened stigma attached to those who have it. And particularly, since the patient's own efforts and coöperation are such large factors in determining the outcome, can there be any justification for failure to inform the patient early and fully as to the diagnosis.

It is well to keep in mind that pulmonary tuberculosis in children and adolescents is more common than formerly realized; that in these young people (as in some adults) physical signs of the disease may be very indefinite or altogether lacking. In these patients the clinical history may have to be relied upon almost wholly. Fortunately in these cases the x-ray often affords definitely corroborative evidence.

Doctor Pottenger's emphasis on the value of an adequate history as a factor in the early diagnosis of pulmonary tuberculosis, even before substantiating physical signs are present, is as important and as timely as ever.

## THE TEACHING OF PERINEAL PROSTATECTOMY\*

By FRANK HINMAN, M.D.

San Francisco

DISCUSSION by Ralph Williams, M.D., Los Angeles;  
R. L. Rigdon, M.D., San Francisco; Robert V. Day, M.D.,  
Los Angeles.

THE operation of "conservative perineal prostatectomy" holds a rather unique position in the field of surgery. It has passed through several short periods of popularity alternating with those of marked disfavor. Few surgeons today perform prostatectomy by way of the perineum and it is a matter of some curiosity to the many who do not, why this small group persists in performing perineal prostatectomy. There are two factors that contribute to the disfavor of this operation. One of these is the so-called "median perineal prostatectomy" with which it has often been confused. At the outset it must be recognized that Young's conservative perineal prostatectomy is the only safe perineal operation for removing enlargements of the prostate and when properly performed is a highly technical surgical procedure, whereas median perineal prostatectomy is a blind, unsurgical method, unworthy of comparison. The results are in no sense comparable. Another factor that has contributed largely to the disfavor of conservative perineal prostatectomy is the fact of its having been attempted in the past by men unprepared to perform it. It must be recognized that the operation can be performed successfully in one way and one way only, so far as fundamentals are concerned, and this one way was first outlined by Young. Modifications that have since appeared are of relatively minor importance. The Young method preserves the rectum and the external sphincter and the ability properly to do this is the stumbling-block of the operation.

### THEORETICAL ADVANTAGES OF PERINEAL PROSTATECTOMY

The theoretical advantages of perineal prostatectomy over suprapubic prostatectomy are numerous. Regional anesthesia is much more satisfactory by way of the perineum. Complications and dangers of infection are much less, the perineum having apparently a localized immunity which the suprapubic route lacks. Furthermore, the suprapubic incision, because of the proximity and danger of injury of the peritoneum and because of the complications that arise from infections of the space of Retzius or the perivesical regions, produces marked postoperative burdens that the perineal route escapes. Keyes, recognizing this danger from infection, has advocated suprapubic prevesical section, the bladder not to be opened until after it has become adherent to the edges of the suprapubic wound so as to prevent spread of infection. But the suprapubic route rivals perineal surgery only when the open,

\* Read before the Urology Section of the California Medical Association at the Fifty-Eighth Annual Session, May 6-9, 1929.



visual operation of Thompson-Walker or Hunt is performed and neither of these can be done by a two-stage method. The perineal route offers better control of hemorrhage because of its being a more open, visual operation and of the more direct access for packing when required. Dependent urinary drainage is also obtained, although Fullerton has recently advocated placing of perineal drains after suprapubic prostatectomy. Because of less shock and danger of the operation, poorer risks can be subjected to it and there is an easier convalescence. The mortality, as shown by numerous published statistics, is at least 50 per cent less than that following the suprapubic operation. The average would be about 3 per cent for perineal as compared to 6 per cent for suprapubic in the hands of those most experienced by both routes. The very practical disadvantages of the perineal method are the greater difficulty of its performance, the greater possibility of poor urinary control afterward and the danger of producing a rectal fistula. Unless these dangers of incontinence and rectal injury can be prevented, the perineal route, in view of the marked advance in the technique of suprapubic prostatectomy, should be abandoned. But it is safe to say that if all urologists were even fairly certain of not injuring the external sphincter or the rectum, all would elect the perineal route because of the above advantages.

#### CHOICE IN METHOD, AS INDICATED BY LITERATURE

A glance at the medical literature of recent years shows that there has been a marked diminution in the popularity of perineal prostatectomy abroad, but a very distinct growth in popularity in the United States. Judging from the titles in the *Index Medicus* alone, there were only twenty-two foreign, as compared to sixty-six American publications on perineal prostatectomy in the last twelve years; whereas, during the previous twelve years, one hundred and forty-five articles appeared by foreigners, as compared to forty-eight by men in this country. With few exceptions, the urologists in this country who prefer the perineal route are men who have been trained by Young of the first and the second generation, and this alone is a good indication of the superiority of Young's method over other perineal methods. It would seem that ability to perform perineal prostatectomy successfully is not easily obtained. Few men who elect this method have been self-taught. Most of them have first seen it done, then helped to do it, and have finally done it themselves. The success of the operation depends upon the mastery of three anatomical principles: first, exposure of the prostate; second, the complete enucleation of the hyperplasia; and, third, proper repair with hemostasis. These principles have been recently published<sup>1</sup> in detail with illustrations, and will be but briefly referred to here. The most difficult problem of the operation is successful perineal exposure which is solely ana-

tomical and which requires for successful performance the recognition of two anatomical signposts: first, the central point of the perineum; second, the fascia of Denonvillier. Once expert in the proper dissection of these anatomical structures, the other steps of the operation become safe and simple.

It is a matter of some surgical interest to know whether the principles of preserving the rectum and urethral sphincter can be successfully taught, for, if not, it would seem that the operation is bound to fall into disfavor. Recent medical literature rather proves that the first generation has carried on successfully, inasmuch as a number of fairly good-sized series with remarkably low mortalities and especially good functional results have been reported by a number of Young's pupils. As a test of ability, the results of seventy operations performed by fourteen of the second generation at the City and County Hospital, while in training, are presented below, as well as the answers of this group to a questionnaire recently mailed them. Most of these men have been practicing urology for a very short period so that their opinions cannot be taken as final, inasmuch as they have hardly had time to fully test or modify them. A minority, however, have been in practice for a number of years and their opinions, therefore, should be more mature. Each one of these men has had charge of the urological service of the San Francisco City and County Hospital for at least six months after two or more years' apprenticeship as an assistant, and almost without exception the operations analyzed are the first ones of this type ever performed by him. In addition, it must be recognized that no more severe test of surgery than this could be asked in that these cases are without exception free clinic type, which are notably poorer risks than private patients, and which have had the ordinary ward service without any special assistance in the way of care, and in that each man has been more or less individually responsible for preparation, operation and postoperative care. The results are not published out of any great satisfaction in them because, as a matter of fact, they are not good results; but the results are published in order to emphasize the difficulties of learning how properly to perform prostatectomy. In order to check the situation the suprapubic operations performed by the same group have been studied. Should similarly poor results persist into private practice with any or all of these men they will no doubt abandon perineal prostatectomy and undertake suprapubic prostatectomy. They may later return to the perineal route because of greater discouragements suprapubically, as this has already happened with one or two of them. No prostatectomist can expect to cure completely every patient who comes to him for operation. There has been, however, a marked difference in the relative degree of success of these different men, some being remarkably skillful, having no rectal fistulae and no incontinence, while others

<sup>1</sup>Hinman, Frank: Perineal Prostatectomy, Contribution to the section on Clinical Surgery. Surgery, Gynecology and Obstetrics, pp. 668-681, November, 1929.



have had a rather high mortality with one or more of these accidents. The series of each individual, however, is altogether too small to draw any comparative conclusions.

*Results of seventy consecutive cases of perineal prostatectomy performed by men in training.*

Probably no more rigid test of an operation could be asked than a series of first cases performed without supervision by fourteen different surgeons in training. Seventy consecutive patients have been thus operated upon:

	Cases
Three operated one patient each.....	3
One operated three patients.....	3
Two operated four patients each.....	8
Four operated five patients each.....	20
One operated seven patients.....	7
One operated eight patients.....	8
One operated ten patients.....	10
One operated eleven patients.....	11
<hr/> Fourteen surgeons	<hr/> 70

Particularly severe is such a test when it is known that these seventy were clinic patients, the majority of whom were old and enfeebled individuals without financial or physical reserve and often enough broken in spirit. And, furthermore, the results must take into consideration the fact that the preoperative preparation with retention catheter, etc., the operation itself and the post-operative dressings and treatments were largely the sum total of each surgeon's individual efforts inasmuch as he received indifferent intern, nursing and orderly service, which at best was always untrained. The results in this series of the first

few operations of fourteen different men, in that they are performed on county ward patients and have been operated in a general hospital on each man's sole responsibility with the assistance of an indifferent service unaccustomed to such cases, are a good test of the difficulties and dangers of perineal prostatectomy.

There were eight deaths in the hospital, a surgical mortality of 11 per cent; four within forty-eight hours of myocarditis or hemorrhage; one each on the fourth, ninth and thirtieth day, of pneumonia and renal insufficiency (a low phthalein before operation in one); and one, who had a rectal fistula in the seventh month after prostatectomy, following operation for repair of the fistula. One patient was operated on for an acute gall bladder thirty-one days after prostatectomy and died three days later.

There were six recto-urethral fistulae, one in a patient who died on the twenty-sixth day of pneumonia, and another in the patient mentioned above who died after a repair operation seven months after prostatectomy, one which was closed immediately and a suprapubic prostatectomy done later. One closed spontaneously within two months, after suprapubic drainage was established by cystotomy; and two were operated on for closure (Young-Stone method) two and one-half and six months later. The last patient still had slight perineal drainage on discharge two months later. All fistulae were closed on discharge.

The appended tables tell briefly the results following operation.

TABLE 1.—*Tabulation of Results*

At Time of Discharge from Hospital from Date of Operation													
Control of Urination	Less than weeks						Less than months						Total
	1	2	3	4	6	8	3	4	5	6	7	8	
1. Good	...	...	2	15	6	5	2	...	...	...	...	...	30
2. Fair	...	...	1	2	2	2	...	...	...	...	...	...	7
3. Poor	...	...	...	...	3	1	1	...	...	...	...	...	5
Not stated	...	...	2	4	6	6	...	...	...	1	...	1	20

DURATION FROM DATE OF OPERATION													
Died in Hospital	1 2 3 4 5	6 7	⑩	8	1, 2, 3 and 4, hemorrhage and myocarditis. 5, 6 and 8, convulsions and pneumonia. ⑨ following repair of recto-urethral fistula in 7th month. ⑩ following operation for acute gall-bladder.								8
Perineum dry and permanently closed	10	23	12	3	3	...	...	...	...	...	1 1	(by cystotomy) (slight leakage after recto-urethral fistula was closed.)	
Not stated	...	...	...	1	4	3	1	...	...	...	...		

Recto-urethral Fistula. All closed.	1. Closed at once, suprapubic operation later. 2 and 3. Closed at 4th and 8th month by Young-Stone method. 4. Healed spontaneously with retention catheter. 5. Died on 26th day (No. 8 above). 6. In 7th month following repair.
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TABLE 2.—Results in twenty-five consecutive suprapubic cases performed by same group of men whose perineal results are analyzed above.

	Cases
Two operated one patient each.....	2
Two operated two patients each.....	4
Two operated three patients each.....	6
One operated four patients.....	4
One operated nine patients.....	9
Nine surgeons	25

It is rather disconcerting to find that in this small series there is an operative mortality of 29 per cent.

- One patient died in twelve hours.
- One patient died in twenty-four hours.
- One patient died in two days.
- Two patients died in five days.
- One patient died in eleven days.
- One patient died in thirty-five days of broncho-pneumonia.
- One patient died in four months, two days after partial cystectomy for tumor of the bladder.

Eight

QUESTIONNAIRE AND REPLIES

The questionnaire mailed the above fourteen men is as follows:

- "Have you any preference as between the perineal and suprapubic route for prostatectomy? State briefly your reasons.
- Have you had rectal fistulae? Explain.
- Have you had incontinence? Explain.
- Will you briefly state in general your experience with prostatectomy?"

Replies have been received from only twelve of the fourteen and all but one have stated a distinct preference for the perineal route. Two of those who have been in practice for several years became discouraged with their results perineally and started to perform prostatectomy through the bladder, but after thirty or forty such operations, decided that their results by way of the perineum were better than suprapubically and returned to the perineal route. Unfortunately the questionnaire is so worded that one cannot tell whether the fistulae and incontinence asked about occurred in private practice or whether cases operated at the City and County Hospital are included.

**Rectal Fistula.**—Three men state they have each had rectal fistula once, the explanations being as follows: (1) "Three days after perineal prostatectomy a large milk and molasses enema was given by inexperienced nurse; fistula persisted until patient's death six months later from carcinoma of the stomach." (2) "I have had one rectal fistula, due to faulty preoperative preparation of the patient whereby the patient was put on the table soon after two enemas had been given without any return. The fully distended rectum was perforated by the index finger during the preliminary blunt dissection of the lateral fossae. The prostate was removed later by the suprapubic route." (3) "I have had one case of rectal fistula in a case of carcinoma."

**Incontinence.**—None of these twelve men has ever had a case of incontinence, although most of them speak of a temporary dribble for the first one or two months postoperatively, after which there was perfect control.

**General Personal Experience.**—As to answers to the general personal experiences, *one writes*: "I have had

between twenty and twenty-five cases. The results have been best where the staff is trained and equipped for perineal work. They are possibly harder to do and care for than suprapubic cases in some hospitals and require a little more personal attention for forty-eight hours, after which they require less expert care than the suprapubic cases. The greatest danger is from hemorrhage and its sequelae (infection). I feel that hemorrhage is often not dealt with radically enough or soon enough. The mortality may probably equal or exceed suprapubic because poorer risks are accepted for perineal operation due to its lack of severe shock and use of local anesthesia." And *another writes*: "Twelve suprapubic prostatectomies with one death. Forty-four perineal prostatectomies with no deaths. These are all private cases and, while the series is small, with one exception, the results have been very satisfactory. The one exception—the median lobe was not removed in the perineal operation." A *third says*: "One's general impression of prostatectomy is that the perineal route is the more surgical procedure of the two as regards the operative field. The suprapubic method savors strongly of crudeness—I refer particularly to the actual method of enucleation." A *fourth replies*: "My short series of cases, all at the San Francisco Hospital, have led me to believe that the perineal route, once mastered, gives the best structural results. I have had six cases. One death two weeks postoperatively from pneumonia. This patient was a bad risk. Had a large diverticulum. The gland was carcinomatous and very markedly adherent to the rectum. Done under spinal and gas-oxygen anesthesia. All other cases gave satisfactory results." A *fifth*: "My own experience with prostatectomy has thus far been limited to about twelve cases. From this meager experience and what I have gathered from the literature, it appears to me that future developments in prostatic surgery will be consummated with the primary control of hemorrhage by suture and attempts to get primary wound healing." A *sixth writes* at length: "My limited experience leads me to believe that the advantages of perineal over suprapubic prostatectomy are more theoretical than practical, when we consider the technique of the perineal method in the past. Both methods probably have certain advantages, one over the other, but the comparative ease with which the suprapubic operation can be done favors its more general use. Consequently, I think the perineal operation ought to be abandoned unless evidence can be adduced to show that its results are so vastly superior to the suprapubic as to more than offset the technical difficulties of the perineal. I do not think that statistics show any vast superiority in the results of perineal prostatectomy. In my opinion the future progress of prostatectomy lies in an improvement in our present methods of controlling bleeding at the time of operation. I think that packing of the prostatic cavity, the use of rubber bags, etc., can and should be abandoned. Without their use it is possible to obtain primary closure and healing of wounds without urinary drainage and thereby greatly shorten convalescence and add to the patient's comfort. My experience in some twenty consecutive cases has shown that satisfactory control of bleeding can be obtained in every case without resorting to packs, etc., and in 90 per cent of them primary healing will occur without the wound breaking down and draining. When it does drain it is usually very transient. In this way it is possible to discharge many patients from the hospital in twelve to fourteen days unless some complication such as epididymitis occurs. This is the most common complication of any type of prostatectomy and probably tying off the vasa should be routine. The perineal operation lends itself much more readily to hemorrhage control and to primary closure and healing than does the suprapubic for obvious reasons. Certainly if results such as these can be obtained with the perineal, then the suprapubic operation ought to be abandoned unless it can come up to the same standard." A *seventh*



reply, brief and to the point, is in full as follows: Have you any preference between the perineal and suprapubic route? "I prefer the perineal." State briefly your reasons: "(a) Easier approach. (b) Prostate more accessible through perineum for clean enucleation; ligation of bleeders; removal of tags, etc. (c) Smoother postoperative convalescence. My suprapubic patients are more apt to be disturbed by abdominal distention and are generally sicker than those operated upon perineally. (d) Lower mortality rate. (e) In my hands quicker closure of perineal fistula than of suprapubic. I find that both methods give about the same functional results, so that because of the advantages in my experience noted above, I use the perineal method, unless other factors enter to modify the choice."

Have you had rectal fistulae? "There have been no rectal injuries or fistulae." Have you had incontinence? "There have been no cases of true incontinence. In several there has been a slight terminal dribbling, which in no instance has persisted longer than six months."

Will you briefly state in general your experience with prostatectomy? "A total of fifty-six perineals with two deaths and twenty suprapubics with two deaths. Until recently have used caudal anesthesia for the perineal and combined caudal and abdominal infiltration for the suprapubic. Have been converted to spinal for all prostatectomies, unless there are definite contraindications."

#### CONCLUSION

The above brief outline of the experience and opinions of a few of the second generation would indicate that most of them are perineal enthusiasts in spite of early discouragement. The conclusion to be drawn, therefore, is that perineal prostatectomy can be taught. But the 29 per cent suprapubic and 11 per cent perineal mortalities point clearly to the need of supervision and improvement of the city and county urological service in providing the final stage of this instruction.

334 Post Street.

#### DISCUSSION

RALPH WILLIAMS, M. D. (650 South Grand Avenue, Los Angeles).—It seems to me that we have gotten away from the subject. There are some surgeons who have changed from the suprapubic to the perineal prostatectomy. A good many of them have had a certain amount of training in the perineal operation. They took up the suprapubic operation because they thought it was easier; but when they tried the perineal operation they found they had to train themselves in the technique. Now, that is the whole problem in perineal prostatectomy; when it is performed by a surgeon who has learned the technique it is technically worth witnessing, but no one, even those who can do it all right, can teach another. Each man has to learn it himself. Being more or less of the old school, I do the suprapubic operation mostly. Operators of equal skill have practically the same results in either operation. Fistulas are not so likely in the suprapubic operation. A mortality of 10 or 15 per cent follows either operation when done by the general surgeon, but a much lower per cent of mortality follows work by the trained urologist.

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R. L. RIGDON, M. D. (909 Hyde Street, San Francisco).—The paper by Doctor Hinman on "The Teaching of Perineal Prostatectomy," includes an argument for the superiority of the perineal route. So far as the matter of choice of route is concerned, the advocates of each method seem to be thoroughly convinced that the one or the other is unquestionably superior and arguments pro or con are scarcely worth while; when a man's mind is definitely made up there is little to be gained in trying to change it. The oncoming medical student must of necessity accept, for

the most part, the opinion of his teacher. This is well, for each operation has its place and each should be kept.

The teaching of either suprapubic or perineal prostatectomy is not easy. After a surgeon has thoroughly mastered the technique, it then seems to him so simple that he has difficulty in realizing the perplexities of the student. I am convinced, too, that a student by study and observation may master the various steps in the operation and be able to discuss and answer questions intelligently and still be very far from really knowing the operation. It is only by doing the operation repeatedly that he acquires skill. It is also certain, under our present methods of teaching, no recent graduate can be a finished operator; his real skill will come after he has gone into practice for himself and has assumed full responsibility, both as to manual manipulation and judgment.

I do not believe a true test of teaching ability is afforded by the number of students who continue in the method they have been taught. What should happen, and actually does, is that wider reading, more extended observation and a growing experience enables the surgeon to choose the method that gives best results in his hands. When he has made this independent choice he is for the first time fully taught. It is manifest a professor cannot supply all this instruction.

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ROBERT V. DAY, M. D. (1930 Wilshire Boulevard, Los Angeles).—It seems to me that we should get back to what Doctor Young has always said, namely, that each should do the type of prostatectomy he personally can do best; in other words, the type of operation for which he has been trained and with which he has had the most experience. This is a bit off of the announced subject, but Doctor Hinman has himself brought up this phase of the matter. Doctor Hinman has just stated, and seemingly most perineal prostatectomists believe that only the perineal method is highly technical. As to the manner of approach, this is true, but as regards all other steps in the suprapubic operation I am sure that such is not the case and no doubt this accounts for the high mortality and poor results when perineal prostatectomists and others without a background of experience and training in suprapubic prostatectomies attempt the suprapubic operation. Indeed every other factor except the approach is highly technical and requires great judgment if the suprapubic operation is chosen.

As regards early healing, I personally dislike to have the bladder wound heal under two weeks' time. There are a pair of kidneys above that have already been damaged during the years of developing prostatism, or at least there is potential damage. Therefore, too early closure of the bladder and consequently the danger of increased intravesical tension and tears of the healing bladder neck and prostatic bed during the urinary act are factors to be considered.

If a patient is considered a good risk from the standpoint of prostatectomy the mortality will be about equal, no matter which type of operation is done. On the other hand, among the poor risks comprising 20 to 30 per cent of cases coming to operation are bad risks, and in this type of case there is no question but that the perineal operation is safer from the standpoint of immediate mortality. Randall used to say that an hypertrophied prostate which was largely intra-urethral should be removed perineally, and a prostate pushing into the bladder should be removed suprapubically. As a matter of fact any prostate may very well be removed perineally by a perineal prostatectomist and, on the other hand, any prostate may satisfactorily be dealt with suprapubically by a finished suprapubic prostatectomist.

Finally, after a practitioner has received the training Doctor Hinman speaks of under the supervision of a master of this operation, he has only just begun; it takes one hundred or more perineal operations before he adequately masters the technique.



## THE CHILD WHO WILL NOT EAT\*

By HENRY E. STAFFORD, M.D.

Oakland

DISCUSSION by C. F. Gelston, M.D., San Francisco;  
William W. Belford, M.D., San Diego.

RECENT work on the caloric value of foods, vitamin needs and standards of weights and heights, etc., has given us valuable information in feeding children, yet the complaint "My child won't eat" is as common or more common than ever. In a recent survey it was found that only 10 per cent of children in well-to-do families were eating properly.

## CAUSES OF ANOREXIA IN CHILDREN

Causes of failure in applying our knowledge of feeding children may be roughly grouped under three general headings: infection, allergic sensitization, and psychological maladjustment. Chronic foci of infection (antrums, tonsils, teeth, urinary tract) we are usually able to locate and eliminate. Acute infections are soon over and, while often the beginning of long standing feeding problems, do not otherwise concern us here. The allergist is often able to rule out sensitization antigens. Too frequently, however, improper habits of training, faulty daily routine and unsatisfactory surroundings at mealtime, keep the child from receiving proper nourishment. We fail to realize that the food needs of individuals are variable; that there are wide differences in food intake each day in a given individual and consequently that we are unable to prescribe food in even approximately exact amounts. This latter I will discuss.

In so far as I know, there is no new "open sesame" to our problem. Its solution lies in the education and reeducation of parents and nurses, but before this can be accomplished we must have a clear conception of the factors underlying anorexia. Why do so many children never eat well and other healthy small folk suddenly rebel against food?

## SPECIAL FACTORS

*Food Preparation.*—Several of the primary causes involve little scientific knowledge but have only to do with the routine minutiae of our small patients' daily existence. Let us first consider the preparation of food. Any foodstuff may be rendered distasteful by improper cooking and serving, for example, vegetables cooked in a large quantity of water with all natural flavor and oils removed, later puréed into an unrecognizable mass and served with an over helping of watery mashed potatoes and, let us say, a soft-boiled egg stirred in, cannot invite the average child of even five or six. Yet how often do we find conscientious nurses and mothers cajoling, urging, bribing this type of food into intelligent children.

*Meals with Family.*—Equally common is the mistake of allowing children under six years to

eat with their parents. The interesting conversation of adults diverts the child from the objective of mealtime. But worse, days come when Johnny or Betty, because of an intercurrent infection, or overfatiguing play, is less interested in food than usual. This is promptly noticed by the parents close at hand. Distasteful food is made more so by suggesting that it be eaten. When this has been repeated several times the child finds himself the center of attraction at mealtime, knowing the dinner conversation will promptly turn to him when a portion of food is left. Was there ever a child who would not sacrifice a portion of spinach to be noticed? Or perhaps father has never been trained to eat artichokes. The fact that it is left on his plate is noticed and as promptly copied with the result that a valuable foodstuff is eliminated from his son's or daughter's diet.

*Time Irregularity.*—Food between meals is not uncommonly an early factor in preventing proper eating at mealtime. The bottle is reheated several times, so that the last ounce of the prescribed formula may be given, often reducing the feeding interval by a full hour. At a little later age zwieback, and graham crackers are offered between feedings so that an opening wedge is formed for the sandwich and the glass of milk in the middle of the afternoon. The vicious cycle is thus easily formed—food between meals, less food at mealtime.

When new tastes or coarser foods are added to the growing child's diet, another problem confronts us. If at first small amounts of foreign articles of food are offered and the amounts gradually increased or food with heavy cellular fibers is finely divided in the beginning—education to novel food elements is smoothly and easily accomplished. But on the other hand, if either is forced when first given, it may be years or even a lifetime before such articles cease to be distasteful to the individual so treated.

*Spoon Feeding.*—It is the exception to see a child eat well who has been spoon fed by nurse or mother after the second year. The average child makes evident its desire to handle the spoon itself before this time. Because coördination is at first faulty, less than the average amount of food is taken—whereupon the attendant with visions of her charge wasting away amid plenty, again takes things into her own hands. The child rebels—picture books or a favorite toy are called into service and large portions of food are poked down to the rhythm of turning leaves or the squeaks of a teddy bear. The result is obvious. The child is fed because he does not eat well by himself; he does not feed himself because he is spoon fed. How unlike the results of Doctor Davis' experiments where ten-month-old infants were allowed to choose their own food each day from a large variety, and when the intake was averaged it was found to form a balanced diet

\* Read before the Pediatrics Section of the California Medical Association at the Fifty-Eighth Annual Session, May 6-9, 1929.



and the progress of the child was within average limits.

*Mental and Physical Fatigue.*—Lastly the tired child is never hungry. This is probably due to the interference by fatigue of gastric peristalsis, which in turn is normally responsible for the sensation of hunger. Without hunger there is no desire for food—or appetite. Consequently the child who rushes to the dinner table tired from play, rarely eats well. Ten or fifteen minutes' relaxation between daily activities and mealtime often makes the difference between a poorly or well-eaten meal. Unfortunately a child is more commonly nagged into eating small portions of food which are little wanted than to be called a few minutes before dinner so that a desire for food may be developed. Needless to say, fatigue from chronic infections and insufficient rest period during either day or night produce the same result.

The above mistakes are common. One or more are present at some time in almost every household. I think the reason lies in the fact that we are educating our parents and nurses to aspire to high ideals for children without showing them there is a limit to their endeavors. We are giving them facts without balanced clinical judgment.

#### GROWTH NOT CONSTANT

All children pass through physiological resting periods in growth. In this discussion the time between the tenth and fourteenth month is by far the most important. When a child begins to change from his baby type of stored-up fat to early childhood, muscle caloric needs are decreased. Failure to realize this causes much forced feedings. Given a previously healthy child free from infection who fails to gain and at the same time refuses 10 to 40 per cent of its food, the natural impulse is to first cajole, then urge and then force. Each phase of such management is met by an increasing resistance on the part of the child.

#### INDIVIDUAL CALORIC NEEDS

We so often fail to consider children as individuals. Standards of heights and weights have been of real service in calling attention to the fact that our small friend just "can't grow." Popular books on caloric and vitamin needs have aided in giving us balanced diets. But to apply average developmental standards or average caloric needs to the individual child is sheer folly. Few attempt it. However, the idea has become firmly fixed in the minds of many parents and nurses that there is a *normal* weight and height, and *normal* food requirement for every child of a given age. How idealistic to raise a race of super-children conforming to high standards! Every parent aspires to such an ideal standard for his son or daughter. Little Johnny is found to be four pounds "sub-standard." Translated into his parents' minds, this means nothing less than four pounds under weight. Johnny is sub-normal. He must be fed up. Increased calories must bring him up to the ideal. Parents, attendants, and at times his phy-

sician, are arrayed against him to bring Johnny up to standard—please, let us not say normal. The boy, firm and in perfect health, but perhaps somewhat small, rebels. The more food that is forced, the less he eats, and he finally becomes whiny, irritable and begins to lose weight, all because we have attempted to force him to conform to an empirical ideal—because we have failed to consider heredity and environment in forming our judgment of his general physical condition.

#### PREVENTION OF MISTAKES IN FEEDING

Preventing the above mistakes in daily routine and child training with the underlying faulty viewpoints which prompt them, offers the key to the solution of our problem. When we are fortunate enough systematically to follow children through the first three years, we are usually able to keep them from being forced or urged to eat. By explaining that different children vary in their caloric needs; that food requirements vary at different times; that health is not synonymous with average weight and height and that growth progresses in uneven cycles and not in a steady uninterrupted increase—parents and nurses may be prevented from falling into the pitfalls of mismanagement based on an overzealous attitude. In my judgment there is never a time when a child should be forced to eat. Dr. Franz Hamburger, in a recent article, states it is folly to praise or urge a child to do that which he naturally wants to do. Hunger and appetite are both natural impulses. Is it not more logical to use them as allies in training children to eat than to stifle both by mismanagement? It is far easier to train a mother to this attitude and so we feel prevent anorexia, than to later attempt to solve a feeding problem of five or six years' standing. To convince a parent that a child will not starve if let alone or that a decrease in weight will only be temporary is often a difficult task. When a mother can be persuaded to follow instructions for a stated time, our point is usually gained. It is rarely accomplished with a single conference and often is impossible unless the child be seen at frequent stated intervals over a period of weeks. The "art of the practice of medicine" required to convince parents that operative procedures are necessary is little compared with that needed in gaining their confidence sufficiently to permit their children to go without food for a few days. We have all seen many small folk refuse food for three or four days, then ask for meals and begin to eat well again when they have always been classed as poor eaters. Others will leave one article of food, e. g. milk, for weeks, and then return to it willingly if not urged.

#### SUMMARY

To summarize our attitude toward the child who will not eat, I should like to state the suggestions which we give to parents in feeding children.

1. That a well-prepared meal be offered at regular times.
2. That it be served in an appetizing manner.



3. That the child shall come to the table in a proper mental attitude, e. g., free from fatigue.

4. That the child shall remain at the table uninterrupted for thirty minutes.

5. That no mention of food be made during or between meals.

242 Moss Avenue.

#### DISCUSSION

C. F. GELSTON, M. D. (384 Post Street, San Francisco).—To say that 90 per cent of children beyond the first year have faulty eating habits sounds exaggerated, but is unquestionably only too true. Certainly, it would seem that as physicians we should seriously take cognizance of this problem and use our influence with parents, teachers, nurses, all those coming in contact with the child, to prevent, by education, such an appalling situation. It would actually appear that there is more unhappiness, more disruption of family placidity and routine by this bad habit than by any one other complaint.

As is pointed out, training must be begun early, at the first sign of this nervous anorexia. As a rule this becomes noticeable in the second year, although frequently enough at the end of the first. Much can be gained if we are only able to impress upon the parents the importance of winning these first "battles of wills." The saving in peace of mind later is incalculable. Without realization, one so easily slips into the habit of diverting the child's attention while, as Doctor Stafford literally expresses it, food is "poked" down the youngster's throat. From this point is a short step to a "vaudeville show" at every meal with a steadily increasing irritability, nervousness and unhappiness of the mother, all of which the child thoroughly enjoys. And to have this repeated three times a day is bliss itself.

We have a practical application of discipline, as practiced by many mothers of several children. Such a mother is not infrequently constantly busy from morning till night. She simply has not the time or nervous energy to spend in pampering the whims of her offspring. Food is prepared for all of them, they are seated at table, and they eat or do not eat as they see fit. The first-born may attempt for a long time to receive special attention but, sooner or later, his overworked mother gives him the needed discipline, and the child, once convinced that the game is lost for him, "falls to." If only mothers of but one child would be as sensible.

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WILLIAM W. BELFORD, M. D. (611 Medico-Dental Building, San Diego).—Doctor Stafford deserves our thanks for this timely paper, for the child that does not eat is fast becoming one of our major problems. By far the larger group of these children fall into the third class Doctor Stafford describes as psychological maladjustment. My remarks are directed toward the prevention of this problem.

There are many ways of approaching the problems these children and their parents present. The prevention is relatively easy if we but remember to educate and direct the parents as to what is to be expected in regard to food habits and growth. In the first six months we have learned that many artificially fed children can grow and develop satisfactorily with three feedings in the twenty-four hours. Some children begin as early as ten or eleven weeks of age to take eight ounces of a moderately concentrated feeding three times a day. This satisfies their hunger and allows a generous interval between for digestion. In other words they eat when hungry. When additional foods are added at six, seven and eight months it is seldom necessary to return to four feedings a day for by proper adjustment plenty may be given with each meal. No between-meal feedings are needed or allowed. At varying intervals more foods are added, but at no time is the parent or nurse allowed to force or override the child's dislike. The child eats because

he is hungry and never to please the adult. The young mother who starts out on the line of no forcing, has a child who eats because he satisfies his appetite and hunger and never to please the adult feeding him or preparing his food. This mother seldom turns up with the child who will not eat.

In the first twelve months the baby gains fast, some ten to eighteen pounds. After fourteen months, though, this gain stops and for the next four or five years the gain will average about four pounds a year. Some in the second ten or twelve months may gain only a pound or two and be quite happy and contented and growing steadily and satisfactorily. The parents are told of this, reassured, told again and again and before the period of stationary weight or slow gain comes on. Few are worried when they understand something of the phenomenon called growth.

I wish it had been possible for Doctor Stafford to go into more detail about the methods he uses. So many of these children, and their parents, with bad food habits have to be cajoled and warped into new ways and thoughts by all sorts of reasoning. I disagree with Doctor Stafford that children under six years should not be permitted to eat with their parents. The child over two years who eats because he has an appetite and hunger for food is not often upset in satisfying his needs by the ordinary family conversation. Children get tired being constantly with the nurse or their mother at mealtimes, and graduation to the adult table is often all that is needed to correct considerable unhappiness.

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DOCTOR STAFFORD (Closing).—It is good to know Doctor Gelston and Doctor Belford feel so keenly about "the child who will not eat."

All scientific progress calls forth new problems. Our advancing knowledge of nutrition is no exception for anorexia in children is certainly an outgrowth of our increased understanding of food. Pediatricians will, of course, vary in their methods of dealing with children who refuse to eat properly, but only when parents and nurses recognize a happy balance between proper food and the child's psychological attitude toward mealtime will the full benefits of our increased knowledge be manifest.

### BLOOD SEDIMENTATION TEST\*

#### ITS SIGNIFICANCE IN GYNECOLOGY

##### REPORT OF CASES

By DONALD G. TOLLEFSON, M. D.  
Los Angeles

DISCUSSION by Donovan Johnson, M. D., Los Angeles;  
Alice F. Maxwell, M. D., San Francisco.

ACCORDING to Baer and Reis the phenomenon of the sedimentation test dates back to the *Crusta Phlogista* of the ancients, which was first described by Galen. It was noted that blood from patients suffering from inflammatory disease, when allowed to stand, would separate out into two portions—one serum, and one erythrocytes. The various theories have been so completely discussed in the literature that they are purposely omitted here. Probably the first individual to use this procedure in gynecologic diagnosis was Lizenmeier, and his technique, as modified by Friedlaender, is the one herein described.

The material for this analysis is based on some two thousand readings on eight hundred and fifty patients admitted to the obstetric and gynecologic

\* Read before the Los Angeles County Medical Association, February 7, 1929.



logic service of the Long Island College Hospital in Brooklyn, New York. Part of the material here considered has previously been reported in a paper presented at the 1927 session of the American Medical Association by Polak and Tollefson.

When correlated with physical findings and other laboratory data the sedimentation test is of definite value in diagnosis. A rapid rate means infection, and a slow rate excludes this possibility.

**Technic.**—Draw 0.2 of a cubic centimeter of 5 per cent sodium citrate into a 1 cubic centimeter graduated tuberculin syringe. With a small hypodermic needle attached, draw 0.8 of a cubic centimeter of blood from one of the small veins in the arm, thus making 1 cubic centimeter of a solution of citrated blood, which is placed in a standard calibrated tube. Shake thoroughly by inverting the tube and take the time. When the erythrocytes have settled to the 18 millimeter mark, leaving the clear serum above, take the time again. The difference in minutes is the sedimentation time. The best period in which to perform the test is about three hours after the last meal.

#### INTERPRETATION OF THE TEST

We have taken 120 minutes as the sedimentation rate for the normal individual. Whenever a rapid sedimentation time is noted the reading is taken to indicate an infection.

**Pregnancy.**—However, Fahreus in 1917 called attention to the variation in the sedimentation time of patients who were pregnant. Like his results, our series show that, after the third or fourth month, the rate becomes lower than normal. Table 1 illustrates the reading in the pregnancy group. In postpartum cases it is of some value. Whenever the sedimentation rate continued to decrease or remain below ten minutes the chances for recovery from postpartum infection were extremely small.

**Carcinoma.**—Carcinoma patients give a rapid sedimentation time whenever infection is present. Frommelt and Motiloff<sup>5</sup> believe that an increased rate might be used as a means of determining a recurrence of the malignant growth. We believe that the rapid rate is due to infection occurring in the tumor tissue. Table 2 illustrates the readings in the more common locations of malignancy. The rapid rate in papillary cyst is probably due to the low-grade peritonitis excited by rupture of the malignant process.

**After Operation.**—There is a definite increase in the rate of settling, following operation, as is shown by fifty cases, where the test was repeated at frequent intervals in order to obtain an estimate of its value. We note that following operations there is a rapid drop with the first three or four days. If the convalescence is proceeding normally the rate gradually ascends; if infection is present, the rapid rate continues until this is eliminated. The postoperative drop in the rate of settling is probably due to absorption and

the changes incident to anesthesia and tissue destruction.

**Anemia.**—Secondary anemia, according to Cherry,<sup>6</sup> causes a slower sedimentation time, while in our experience, where no infection is present, there is no change.

**Average Readings.**—Having allowed for certain conditions which cause an error in appreciating the significance of the test, we find that in typical pathologic conditions certain average readings, which, when compared with other observers, agree almost identically. In Table 3 a few of the more common rates are charted. Whenever the sedimentation time is below thirty minutes, accumulation of purulent material, either as a circumscribed abscess, or multiple minute foci, will be a constant finding. In active tubal infections with leukocytosis and elevation of temperature, the rate of sedimentation averages thirty-eight minutes. Where this type of infection has been present but not active, the readings vary between ninety and two hundred minutes. Parametritis averages thirty-six minutes, while the long-standing process, which is clinically inactive, averages one hundred and thirty-six minutes.

As an aid in diagnosis two cases will show its value.

#### REPORT OF CASES

**CASE 1.**—Patient 2472, admitted to the hospital with a diagnosis of infected ovarian cyst, showed a sedimentation time of nineteen minutes. At operation, in addition to adenoma-carcinoma of the uterus with metastasis, a subsiding acute appendix was also discovered.

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**CASE 2.**—Patient 3462, with a sedimentation time of twenty-seven minutes and a normal blood count, was admitted for postoperative hernia and a tumor mass in the right lower quadrant. On exploration of the abdomen a parametrial abscess was discovered. In another case the admission diagnosis was fibroid with degeneration. The patient had a normal blood count, but a sedimentation time of fifteen minutes. The operation was postponed. Patient developed a temperature and ten days later a pelvic abscess was drained per vagina. Rapid sedimentation spells infection. If not in pelvis, other parts of the body may harbor the focus.

#### VALUE OF TEST IN ECTOPIC PREGNANCY AND SALPINGITIS

If sedimentation is an index of the presence of infection its use might be indicated in the differential diagnosis of ectopic pregnancy. It is a well-known fact that the leukocyte count varies markedly, even when taken at frequent intervals. Following intraperitoneal hemorrhages, there is a marked leukocytosis; but if the bleeding stops the count will approach normal within a few hours. The temperature is also of no value in diagnosing ectopic pregnancies. Comparative readings show that the rate in extra-uterine pregnancy is slow, while that of salpingitis is rapid (Table 4).

In ten ectopic pregnancies reported by Polak and Mazzola<sup>7</sup> the average sedimentation rate was 105 minutes, while in fifteen of this series the average reading was 115 minutes. The more ad-

vanced the pregnancy the more rapid the rate, as Table 5 indicates. The intact ectopic pregnancies or those with a slight rupture, if seen early, will show a reading of around 100 minutes, while the old cases, where the symptoms have been of two weeks' or more duration, give the rapid readings of an infection. Apparently old hematomas excite a low-grade peritonitis. Here the test is of little significance, but when the typical symptoms of either condition are present and the onset is of recent date a slow rate is indicative of an ectopic pregnancy, while a rapid rate suggests tubal infection.

Two cases will illustrate this point.

CASE 3.—Patient 2724, with a typical history of a postponed menstrual period and physical findings suggestive of ectopic pregnancy, had a leukocyte count of 33,400, but the sedimentation time was only seventy-two minutes. The following day it had dropped to forty-five minutes, but the findings were so typical that laparotomy was done and an acute salpingitis was discovered.

CASE 4.—Patient 6336. The history and pelvic findings were again typical of an extra-uterine pregnancy, but the sedimentation time was thirty-five minutes. At operation an acute salpingitis was found. Therefore, by exclusion of infection, the sedimentation test may add confirmatory evidence in the diagnosis of early ectopic pregnancy.

A SAFEGUARD IN ELECTIVE PROCEDURES

In gynecology at least 90 per cent of the operations are elective, and when one considers the danger of an ordinary laparotomy in the hands of the most careful operator he is at once impressed with the danger, when seemingly simple fibroid tumors are complicated by clinically inactive but quiescent infection. When leukocytosis and elevation of temperature are present we know that infection exists; but in those cases where the blood count and the physical findings suggest no complication the sedimentation time is an index of the presence and severity of the infection.

Following our previous report, we formulated the rule that patients should not be subjected to laparotomy if the sedimentation time was under ninety minutes. We believed that when operation was performed on such patients the convalescence would be prolonged, troublesome complication might arise and the end-result would be unsatisfactory. We have performed operations in these cases, and they have been of value in proving our conclusion in this work.

In benign tumors the readings are normal (see Table 6), but coexisting infection increases the speed of sedimentation. The judgment of when to operate is probably more important than how to perform the procedure.

CASE 5.—Patient, Mrs. N., was admitted to hospital with a diagnosis of tubo-ovarian disease, with a normal blood count and normal temperature, but a sedimentation time of thirty-two minutes. A hysterectomy was performed, and a stormy convalescence followed. She was discharged on the twenty-second postoperative day against advice, with a sedimentation time of twenty-eight minutes and a marked pelvic exudate. She was seen in the clinic two months later and her general condition was extremely poor.

CASE 6.—Patient, Mrs. S., with a sedimentation time of forty-five minutes, normal blood count and normal temperature, had a hysterectomy for fibroids. Her postoperative course was extremely unsatisfactory; she developed a wound infection which kept her in the hospital for thirty-eight days.

CASE 7.—Patient 7107, had a pelvic abscess in 1925. Admitted to hospital in 1928 because of pelvic pain and fibroid tumor. The blood count and temperature were normal and the sedimentation rate was 240 minutes. The danger of lighting up an old focus was eliminated.

CASE 8.—Patient 6100, normal blood count and normal temperature, had a sedimentation time of twenty-seven minutes. Hysterectomy was performed. A stormy convalescence followed.

CASE 9.—Patient 8995, with a diagnosis of fibroids, showed a normal blood count and sedimentation time of forty minutes. Patient died thirty-one hours after operation. Diagnosis at death was given as toxemia and cardiac failure. Possibly the rapid rise in temperature, pulse rate and respiratory rate, indicated the presence of some infection which we did not discover.

TABLE SHOWING SEDIMENTATION TIME IN VARIOUS CONDITIONS

TABLE 1.—Pregnancy		
No. of cases	Diagnosis	S. T.
33	Normal pregnancy	110 min.
25	Postpartum, normal	52
27	Postpartum, febrile	20
20	Abortion, 2-3 months	68
15	Abortion, febrile	30

TABLE 2.—Malignancy		
No. of cases	Location	S. T.
11	Cervix	31 min.
8	Ovary	85
5	Breast	52
10	Uterus	80
3	Papillary cyst adenoma	23

TABLE 3.—Infection		
No. of cases	Diagnosis	S. T.
18	Pelvic abscess	16 min.
22	Breast abscess	23
31	Salpingo-oophoritis, active	38
16	Salpingo-oophoritis, inactive	130
25	Pelvic infection, active	36
31	Pelvic infection, inactive	136

TABLE 4.—Ectopic Gestation versus Salpingitis		
No. of cases	Diagnosis	S. T.
10	Ectopic (Polak and Mazzola)	105 min.
15	Ectopic (Recent)	115
31	Salpingo-oophoritis, active	38
25	Pelvic infections, active	36

TABLE 5.— <i>Ectopic Gestation</i>			
No. of cases	From onset	Remarks	S. T.
1	1 day	Free blood	170 min
2	8 hours	Faint, immediate operation	167
3	1 day	Some free blood	138
4	2 days	Fimbriated end	113
5	2 days	Boldt's sign	102
6	7 days	No sharp pain	92
7	6 days	Free blood	90
8	?	Tubal abortion	89
9	2 weeks	Rubin Test 3 months	74
10	12 days	Old P. I. D.	57
11	4 weeks	Peritoneal exudate	27
12	5 weeks	Hematoma, not removed	14

TABLE 6.—Benign Tumors		
No. of cases	Diagnosis	Average S. T.
13	Ovarian cysts	180 min.
21	Fibroids	175
37	Fibroids and infection	65
3	Fibroids and necrosis	47



## CONCLUSIONS

1. While Schmitz, reporting on eighty patients, and Cherry, reporting on seventy-one patients, state that the test is of no value, most writers believe it has its place in laboratory diagnosis when the blood count, temperature, and physical findings are correlated with it.

2. Rapid rates indicate infection. Slow readings exclude this possibility of infection, regardless of leukocytosis and elevation of temperature.

3. It also is suggested that it might be of use as a prerequisite in the Rubin test, insertion of radium in benign conditions and in diagnostic curettage.

4. As it is a simple procedure, its routine use seems justifiable because it may be a means of excluding the latent or quiescent infection, when an elective operation is under consideration, and thereby prevent prolonged convalescence, morbidity, and mortality.

1401 South Hope Street.

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## DISCUSSION

DONOVAN JOHNSON, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Tollefson's paper gives an accurate description of the sedimentation test as it is performed in the majority of clinics in this country. The small glass test tubes in place of the long capillary tubes first used and the standardized readings at the 18 millimeter mark simplify the procedure greatly. It is a test that anyone can use, whether experienced in laboratory work or not, and for this reason I believe it should be given a more extended trial. It will be only as we use this sedimentation test that personal conclusions can be drawn as to its value. We have listened to Doctor Reuben Peterson's hearty recommendation of the test this evening and, with the knowledge that others are finding it a distinct advantage in the diagnosis and prognosis of disease, I feel certain it will not be long until it is in general use.

While my experience with the test in gynecologic cases has been somewhat limited, I can say I have given it a good trial in obstetric patients. During the past year, at the Chicago Lying-In Hospital, it was used repeatedly in pathologic cases where the diagnosis was in doubt or where some light might be thrown on the prognosis of a given case. As has been brought out by others, the greatest value of the test is its capacity to show the severity of an infection. It is also valuable as being one of the most delicate tests in picking up an early infection. The importance of repeated examinations at frequent intervals cannot be overemphasized.

The value of the sedimentation test in obstetrics is somewhat limited, as compared to its usefulness in gynecology. This is due to the normal drop in the sedimentation rate during pregnancy which becomes

confusing when comparing the rate with that in the nonpregnant state. It was in the hope of gaining a definite idea of this normal drop that a series of fifty cases were followed through pregnancy with tests made at regular monthly intervals, over two hundred and fifty determinations in all being made. The patients chosen were those passed on by the internists as being perfectly normal from a physical standpoint. Each sedimentation test was checked by the body temperature and white blood count. A definite curve was secured in each case, the greatest drop being reached by the sixteenth and twentieth week. A normal variation of between twenty and thirty minutes exists between different individuals, but it was striking how uniform the test remained throughout pregnancy in the same individual. An excessively low reading at any time during pregnancy may be taken as an indication of pathology, most valuable of course during the first half of pregnancy, when the normal rate is still relatively high.

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ALICE F. MAXWELL, M. D. (University of California Hospital, San Francisco).—For the last three years every patient admitted to the gynecologic service of the University of California Hospital has had a sedimentation test done in addition to the routine clinical and laboratory examinations. In healthy women the blood sedimentation varies from three to four hours. As the result of observation on more than one thousand women, we feel that the repetition of the test and its correlation with the physical findings, temperature, pulse and leukocyte count is of very definite value. In the early weeks of pregnancy the rate of sedimentation is of little or no value in establishing the diagnosis; in general the sedimentation time decreases as pregnancy advances. Before the fifth month of pregnancy, when the diagnosis may rest between a rapidly growing myoma and a pregnancy, the test is of no great aid; after this period no special test is necessary to establish the diagnosis. A rapid sedimentation time in a nonpregnant woman indicates infection, although this infection need not necessarily be confined to the pelvis. A greatly decreased sedimentation time may be expected in all acute inflammatory conditions of the pelvis and in severe toxemias due to absorption of native or foreign proteins. Uncomplicated fibroids (leukocytes normal, fever free) invariably showed a slight increase of speed in sedimentation; degenerated fibroids (in afebrile women with normal leukocyte counts) showed a markedly increased rate. Large nonmalignant ovarian tumors also showed a more rapid sedimentation than the norm; if associated with adhesions or ascites the blood settled even more rapidly. Cervical carcinoma invariably showed a rapid rate; especially in the presence of necrosis or metastasis. Pelvic carcinoma, in general, showed rapid sedimentation. In pelvic inflammation a sedimentation time greater than sixty minutes is evidence against actual pus in the pelvis, one under thirty minutes is invariably found with purulent collections. It has long been recognized that a subacute or latent pelvic infection may be reactivated by surgical procedures, yet in these cases the leukocyte count and temperature curve are often normal. The rapid sedimentation, which is always found with these often unsuspected conditions, is a very delicate and accurate index of the infection, and a most valuable test for the virulence of the infection. The sedimentation test is also of value, from a prognostic point of view, in cases of sepsis, whether puerperal, postabortive, or postoperative. It responds more readily to the virulence of the infection than does the leukocyte or temperature curve, and is a more delicate prognostic index. This simple test is sufficiently dependable to warrant its use in every gynecologic patient.

Doctor Tollefson is to be congratulated on the concise presentation of his work and for the reasonable deductions drawn therefrom and for emphasizing the importance of a simple yet most valuable diagnostic and prognostic laboratory procedure.



## KAHN PRECIPITATION TEST FOR SYPHILIS\*

AS USED IN CONJUNCTION WITH THE  
WASSERMANN TESTBy NEWTON EVANS, M. D.  
Los Angeles

DISCUSSION by Gertrude Moore, M. D., Oakland; W. T. Cummins, M. D., San Francisco; Zera E. Bolin, M. D., San Francisco.

FOR the greater part of a year at the serological laboratory of the Los Angeles County General Hospital the Kahn test, in addition to the Wassermann test, has been used on all sera to be tested for syphilis. During this time (231 days) such parallel tests have been done on 17,694 sera. Of the entire number of specimens (17,694) the two tests were in complete agreement in 17,112 (or 96.71 per cent), while in addition 210 (1.18 per cent) other specimens were in relative agreement.

An absolute agreement means that both tests are either negative, or both doubtful (plus-minus or plus), or both positive (two plus, three plus, four plus) in reactions.

A relative agreement means that one test is doubtful and the other test either positive or negative.

Absolute disagreement means one test is positive and the other negative.

Thus, of the entire number approximately 97.9 per cent were in either complete or partial agreement, leaving 2.1 per cent of complete disagreements. These results, based upon nearly 18,000 specimens, are very similar to other published figures. In Doctor Kahn's "Serum Diagnosis of Syphilis by Precipitation" he presents results of comparative tests upon over 100,000 sera in his own laboratory, showing combined complete and relative agreement in more than 99 per cent. T. J. Hull reports tests upon over 25,000 specimens with a combined complete and relative agreement of 97.8 per cent to which our results (97.9 per cent) are very similar.

It is evident that in laboratories where large numbers of such tests are made the results of the Kahn method closely parallel those of the Wassermann test.

## OUR EXPERIENCE

For some months preceding our experiments with the Kahn method the laboratory was using the Kolmer system of the Wassermann test in which a preliminary qualitative test was made upon all specimens, followed by a Kolmer quantitative upon all cases in which the preliminary qualitative test was positive or doubtful. After several thousands of parallel tests were made and it became evident that the Kahn test could be relied upon as a routine method, we abandoned the plan of making Kolmer quantitative upon all positive or doubtful sera as evidenced by the preliminary qualitative Wassermann test, and applied the quantitative method only in those specimens where a disagreement appeared between the quali-

tative Wassermann and the Kahn test. This is our present plan and appears to us to be an entirely practical and satisfactory routine method of making serological tests for syphilis under the conditions existing in our hospital, where about one hundred specimens of sera come to the laboratory daily.

We think the present plan of making routine parallel tests, Wassermann and Kahn, has definite advantages over other methods, such as running the regular Wassermann with two antigens, or the method which was formerly used in our laboratory as described above, namely, the Kolmer qualitative followed by the Kolmer quantitative, or the plan of substituting entirely Kahn tests for the Wassermann method, which it is said is being done in some hospitals and notably in the United States Navy on ships away from their bases.

## ADVANTAGES OF KAHN TEST

1. It is less time-consuming. Quicker results and reports can be secured and it is more economical for this reason.

2. It is much simpler, as one reagent only—the antigen—is required, in contrast to the several ingredients of the classical Wassermann. No animals are necessary to supply the fresh complement.

3. Reports of those using the Kahn method indicate that it is a somewhat more delicate indicator of the presence of syphilis than the Wassermann test. A higher proportion of treated cases and others not reacting positively to the Wassermann for reasons unknown do react positively to the Kahn test. Our experience confirms this opinion. In the 372 sera in our series where there was definite disagreement between the two tests, 229 were Kahn positive and Wassermann negative while only 143 were Wassermann positive and Kahn negative. In thirty cases where the clinical histories and findings indicated the presence of syphilis, twenty-one cases had positive Kahns and negative Wassermans, while only nine had positive Wassermans with negative Kahns.

4. An advantage of decided importance is the fact that in the great majority of sera which for any reason prove "anticomplementary" in the Wassermann test (manifesting an ability to bind or deviate the complement even in the absence of the antigen), making the reading of the test impossible in the ordinary titrations, the Kahn test is not interfered with and will give satisfactory information as to the presence or absence of syphilis. In our series from one-half to one per cent of the specimens proved to be anticomplementary, and in all of these satisfactory readings were secured without trouble by the Kahn test. The records of forty-two cases of this kind indicate that four were negative with the Kahn test and thirty-eight were positive. Thus, if we had been limited to the Wassermann method there would have been thirty-eight positive cases where we must have reported that no results could be secured because the specimens were anticomplementary. (There are methods of securing results on some of these sera by using high dilutions of

\* From the Laboratory of the Los Angeles County General Hospital, Unit No. 1.

\* Read before the Pathology Section of the California Medical Association at the Fifty-Eighth Annual Session, May 6-9, 1929.



the serum and appropriate quantities of the reagents, but these are extremely complex and time-consuming, and are not ordinarily used.)

#### DISADVANTAGES OF THE KAHN METHOD

1. It is not practical for tests of cerebrospinal fluid; at least we have found this to be the case in our experience. These specimens are tested by the Wassermann method.

2. It requires more experience and judgment to read the results of the Kahn reaction than to recognize the varying degrees of hemolysis in the regular Wassermann tests, and long training is essential on the part of a technician if the results are to be depended upon; consequently, it is not applicable to office work unless done by one who has had long experience in the method. On the other hand, it is possible that some of the modifications in which the test is made on a microscope slide and read with the microscope may be more dependable in the hands of persons without great experience.

3. In our experience the Kahn test is liable to be "temperamental" and the mixtures to vary in degrees of general cloudiness from day to day, so that if the parallel Wassermann tests were not available for comparisons one might be in perplexity as to the dependability of his tests. We have also found that the preparation of a satisfactory antigen is a more difficult and delicate process than it is to secure a satisfactory Wassermann antigen.

#### ADVANTAGES OF COMBINED METHOD

1. In our opinion it is preferable to use both tests in conjunction, especially in laboratories where many specimens are examined, for there is a small proportion of cases with wide disagreement (negative in one test and four plus in the other) in which the conflicting results are of value, for it is undoubtedly true that "false negatives" in properly checked tests, either Wassermann or Kahn, are much more frequent than "false positives," and therefore it is important to have the advantage of the knowledge presented by the "positives" from either method.

2. When the two systems are used side by side each serves as a check upon the other, and quickly makes evident any technical error or defective reagents.

3. Another advantage of making parallel tests is in learning to read the Kahn test. The beginner tends to strain his eyes and his imagination to see fine precipitates which are not there, and by reading them as suspicious (plus-minus) and checking against the Wassermann results which are evidently negative, he will realize he is attempting to read the precipitation test too closely.

In conclusion, our experience with the Kahn precipitation test leads us to regard it as a distinct addition to available and practically useful laboratory methods, and we believe it is particularly effective when used in conjunction with the Wassermann tests in laboratories where large numbers of specimens must be examined.

It gives me pleasure to acknowledge the faithful labor, the helpful suggestions and the enthusi-

astic coöperation of Bertha Ogburn and Muriel Chesnut, without which the preparation of this paper would have been impossible.

Los Angeles County General Hospital.

#### DISCUSSION

GERTRUDE MOORE, M. D. (2404 Broadway, Oakland). Doctor Evans' paper emphasizes the importance of the use of both the Kolmer complement fixation and the Kahn precipitant test in the study of syphilis. Our experiences check those of most workers, regarding the percentage of tests which agree. The Kahn reaction is inferior to the Kolmer in standpoint of specificity, and superior in that it gives positive readings earlier in the disease and longer after vigorous treatment. The Kahn reaction is of particular value in determining the point at which treatment should be stopped in old cases of syphilis. We are convinced that both tests should be used in all cases, but if this is impossible and one must be selected, there is no question but that the Kolmer reaction is more reliable and, therefore, the test of choice.

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W. T. CUMMINS, M. D. (Southern Pacific General Hospital, San Francisco).—Any test for syphilis that may be used in conjunction with the Wassermann technique deserves consideration on account of the unmerited criticism which has been passed upon the Wassermann technique by reason of widely different reports from different laboratories. Numerous techniques have been offered and none appears to have survived substantially but the Kahn test. Many reports, which include the parallel examination of a large number of blood sera with both techniques, attest to the value of the Kahn. Doctor Evans has studied a very worthwhile number of sera. His report, confirming the work of Kahn and others, shows a very high percentage of agreement of the two techniques. There are well-recognized difficulties with and disadvantages of the Kahn test. The difficulties with cerebrospinal fluid later may be cleared away. Unquestionably the advantages materially outweigh the disadvantages of the test, and it stands today as a valuable means of examination for syphilis.

The discussor heartily agrees with Doctor Evans that the Kahn test is particularly effective when used in conjunction with the Wassermann. In my opinion, as implied also by Doctor Evans, the Kahn test should not be used alone.

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ZERA E. BOLIN, M. D. (University of California Medical School, San Francisco).—The paper by Doctor Evans is in accord with the testimony of practically everyone who has run a large series of comparative tests using the Kahn and one of the modifications of the complement-fixation tests. The Kahn test is based upon the reaction of the "reagin" in the luetic serum with a very sensitive antigen. Positive reactions are shown by a precipitation of the colloids in suspension in the antigen.

Having had considerable experience with precipitation tests for syphilis, including the Sachs-Georgi, the Meinecke and its modifications, and the Kahn test, I feel that a precipitation test should never be used alone as a diagnostic procedure.

The ease of manipulation of the Kahn test lays it open to use by unskilled workers who do not understand the underlying principles. The antigen is hard to prepare. It is hard to dilute so as to get the same colloidal suspension upon which, in all probability, its sensitiveness depends. The precipitate is hard to read accurately, and the strength of the reaction depends upon the judgment of the person reading the test. It is most emphatically not a procedure which can be turned over to the office nurse. The specificity of this precipitation has yet to be checked in a large series of entirely negative sera. The conditions causing the precipitation of the colloidal suspension may be in-



voked by changes in the serum caused by other diseases.

In my opinion this test must be always substantiated by comparison with a sensitive Wassermann technique, and the best of these, as yet, seems to be Kolmer modification of the complement-fixation test.

### SCABIES AND ITS COMPLICATIONS\*

By THOMAS J. CLARK, M. D.

AND

FRANK H. STIBBENS, M. D.

Oakland

DISCUSSION by George D. Culver, M. D., San Francisco; Robert T. Legge, M. D., Berkeley; C. Ray Lounsberry, M. D., San Diego.

THE problem of the medical adviser is very often made difficult by the absence of any exact etiological data upon which to base a diagnosis, and aid judgment in formulating proper procedure for the care of his patient. But in scabies the etiology is known and the fog of uncertainty is entirely dispelled if proper caution is used in arriving at the diagnosis. The cure is attained by selection from a very few efficient remedies and by use of the same in the proper strength and mode of application.

Scabies is not a difficult dermatological question, but it is one that should be given careful treatment by the attendant doctor so that a very annoying condition may be properly and completely cured.

*Cause.*—The disease is caused by a minute animal parasite that lodges in the skin. This parasite is a spider. Human scabies is produced by a species known as *Sarcoptes scabiei hominis*. This variety has become adapted to human habitation and is readily passed on from one infested person to another. The substrata of society constitute the reservoir of hosts for the unending reproduction of the parasites. Mites allied to human acari are parasitic to horses, cows, goats, dogs, cats, chickens, and many other animals. These have made man a temporary host, but they do not become permanently entrenched as are the *sarcoptes hominis*.

Mites are found in every part of the world. Many are parasitic, but there are also varieties that exist on decaying matter both vegetable and animal. In museums they are troublesome to the specimens which must be protected from these destroyers that would literally eat them up.

From animal to man the transfer occurs most frequently by the variety that causes horse scabies.

After possessing its host the female parasite proceeds to burrow into the epidermis to a sufficient depth to secure its nourishment. The male enters the burrow for sexual mating after which it retires to the surface to seek out other females, or it burrows an offshoot for itself and dies in a few days, its life cycle from ovum through the moulting periods and adult sexual life lasting about one month. The female remains in its burrow and, after impregnation deposits eggs in

the channel of the burrow at the rate of one or two each day, for a period of two or three months, then dies. The ova develop rapidly, the young mites appearing in from three to six days. At first there is a larva stage, the number of legs and bristles being less than for the adult. The body surface is then shed. More legs and bristles appear, and after the second moulting the now mature mite is ready for the reproductive stage. About one month in time is occupied from ovum to reproduction period, but it has been calculated that one female may have before her death several hundred thousand progeny. Thus the human Gulliver has plenty of Lilliputians to attack him.

The cause of the skin reactions in scabies is the wounding of the skin tissues by the burrowing of the acarus into the epidermal layers. This hominis variety of the parasite is not a surface organism, but undermines the horny stratified cell layers so that it may reach the lower portions of the epidermis. Here it has an abundant food supply, is secure from danger, and may deposit its ova for perpetuation. The burrow is, therefore, its home, its defensive quarters, its nursery, and its tomb.

*Symptoms.*—The outstanding subjective symptom of scabies is itching. So characteristic is this symptom that "the itch" remains the common name for the disease. It will vary in degree from an intolerable condition in sensitive individuals to but a passing inconvenience in the phlegmatic. There is loss of sleep from bed-warmth itching. If pyogenic inflammatory reactions occur to any extent, especially in children, there may be much tenderness and pain in the hands and feet, the buttocks, and the flexures.

The eruption is found quite generally over the body surface as a discrete vesicopustulation or papulation. The sites of preference are at the opposed surfaces of the fingers and finger webs, the wrists, ulna border, the axillary folds, the nipples and areolae, the buttocks and genitals. Uncomplicated lesions are small, like mustard seed. They are not confluent unless modified by eczema or pyogenic infection. Lesions in cases where treatment is not started promptly become larger and, as the parasites multiply, the skin becomes thickened and pustular. Such a patient presents a sorry-looking appearance. Scabies associated with diseases that modify the sensibility of the skin, as in paralytics or in leprosy, may become very extensive with thickened masses of crusts and offensive oozing.

*Complications.*—The complications of the disease are due to pyogenic organisms developing in the skin with the various phases of inflammation which they produce. Infection is the more readily brought about by the burrow destroying the defensive qualities of the cornified epithelium.

Furuncles, impetigos, adenitis, and phlegmons are produced.

Impetigos are frequent in children. The child becomes a mass of pustular sores and thick crusts that involve the scalp and face as well as the rest of the body. The original infection by scabies in these cases may be overlooked. The child may be

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prostrated by fever and seriously ill from the sepsis.

*Diagnosis.*—Diagnosis of scabies in a well-marked case is simple. Discrete vesicopustules or papules distributed about the hands and fingers, the wrists, axillae, nipples, abdomen, buttocks and genitals, with the subjective symptoms of itching and loss of sleep is suggestive. The history will usually disclose more than one case in a family. The small burrows are not so easily seen. They may be found as coarse, threadlike lines, one-quarter to one-half inch in length, about the areolae of the nipples or on the glans penis. Urticaria, furuncles, impetigo, are frequent accompanying symptoms. The parasite may be extracted from its burrow in a recent vesicular lesion, by using the eye of a fine sewing needle as a small curette. It is not difficult to recognize, with a magnifier, portions of the mite's body or legs thus recovered from the skin.

*Differential Diagnosis.*—Diseases that would have to be excluded in the diagnosis are urticaria, eczema, pruritus, dyshidrotic conditions, herpes progenitalis, and chancre. Urticarial wheals are frequently seen in scabies. They may be due to direct irritation of nerve endings from the presence of the parasite in close contact to the nerve bulbs or as a proteid reaction from absorption of animal products from the mite. In uncomplicated urticaria a search should show absence of vesicles and papules suggestive of the itch. Eczema has confluent lesions that fade gradually into sound skin at its borders. Vesicular eczema of the hands and fingers will closely resemble scabies, but will usually remain localized.

Pruritus shows scratch marks and a red skin at times, but lacks the lesions of scabies.

Dyshidrosis, either tineal or inflammatory, shows predilection for the hands and feet, the palms and soles particularly. Its spread to other portions of the body is quite different from scabies.

Partially treated scabies may show remains of lesions about the genitals that are flattened papules, and in association with these are enlarged lymph nodes that would lead the unwary to mistake the picture for genital herpes or possibly a primary case of syphilis.

How soon we can promise to cure scabies depends largely upon the case and its complications. The parasites can be destroyed in a day or so in most cases, and in skins that are sensitive to chemical dermatitis a week or ten days will suffice to arrive at a satisfactory result.

Unfortunately a few patients become acarophobic. How one may convince these unfortunates that their tormentors are eliminated is a problem in mental therapy.

*Treatment.*—The treatment of scabies should be a very simple matter. We have a parasite lodged upon the skin and embedded at no great depth in the surface layers of the skin, easily destroyed by comparatively mild chemicals, such as sulphur, naphthols, or the balsams. The attainment of a rapid and complete cure is possible in the majority of robust children and adults by a

thorough soap and water scrubbing of the skin surface. This lathering to be repeated two or three times in the course of a half hour and followed by a vigorous massage into the skin of a 12 per cent sulphur and a 4 per cent balsam of Peru ointment, which is not removed for twenty-four hours.

The bedding and clothing of the patient should be treated with heat to destroy parasites lodged therein. Failure to carry out this precaution with bedding and clothes will more than likely reinfest the patient.

This rapid method of treatment is desirable only in institutions or where circumstances would not permit of the milder and more prolonged care. The preliminary softening of the cornified layers of the epithelium to open the burrows and lesions by scrubbing is essential to permit contact of the chemicals with the parasite and the ova. But this intimate introduction of the antiparasitic agent into the wounded skin is liable to set up a chemical dermatitis, and if the last of the marauders has not been destroyed there is soon reinfestation of the skin.

In a large proportion of these cases our preference is to furnish the family or the patient with a strong stock ointment which is reduced in strength at the time of use by rubbing up with vaselin.

Instruct the patient to bathe with warm water, castile soap, and into the lather dust some powdered borax. This borax and soap lathering should be continued for ten minutes, rubbing well about the sites of preference of the parasite. After the bath apply a 4 per cent precipitated sulphur vaselin ointment in which is also 1 per cent balsam of Peru. Use this mild strength twice a day for two days and then bathe. If there are no ill effects from the chemicals have the patient double the strength of the ointment for the next two days. After the second bath, with change of clothing, the milder ointment can be used to finish the course of treatment for the week. Where a mild dermatitis is produced it is well to use 5 per cent oxid of zinc incorporated with the sulphur to take the place of the balsam of Peru.

In a family it is desirable to have all members use the mild ointment during a course of treatment, even should some show no signs of the disease. This extra vigilance will probably save cases of delayed appearance.

As "the itch" does itch, the patient is often the victim of the parasite for longer periods than is necessary because of friendly diagnosis by druggist, nurse, or companion, who ordinarily prescribes sulphur and lard because "that will cure the itch." Failure results from improper application of the remedy as well as from reinfestation from clothes, bedding, and human contacts.

1800 Madison Street.

#### DISCUSSION

GEORGE D. CULVER, M. D. (Four Fifty Sutter, San Francisco).—Doctor Clark and Doctor Stibbens have given us an excellent paper on scabies, and it is a timely one as the disease is unusually prevalent. They call attention especially to the infective complications. It is obviously true that this feature is one



of the most important, as skin infections too are prevalent.

No doubt in many instances we all fail to recognize the scabetic element when other conditions are marked. However, any widespread superficial infection should bring to mind the possibility of scabies as an exciting cause. And not in every instance is it a simple matter to prove the presence or absence of scabies.

When in doubt and when the typical runs are masked by added infection, or when the natural progress of the disease is held in abeyance by the patient's occupation, bringing his hands and forearms in contact with deterrent chemicals such as occurs with those working in the gasolines and oils, it is well to prove the presence of the mite or its eggs or feces. This usually can be done by slicing off a suspicious-looking lesion from a finger or wrist with a sharp blade, cutting as deep as the papillary layer, mounting the flat specimen in glycerin and examining it under a low power lens of the microscope.

Creolin has proved an excellent addition to the therapeutic armamentarium for the cure of scabies. It is an excellent scabicide in a nonirritating strength, and it has the additional most desirable feature of acting as a decided antiseptic help in clearing up whatever pyogenesis may be present. It also has a definite place with skins that are sensitive to sulphur.

It is always well to specify a particular preparation of creolin. The druggist knows the best one. Five per cent strength in vaselin or incorporated in unguentum acidi borici has proved most satisfactory.

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ROBERT T. LEGGE, M.D. (University of California Infirmary, Berkeley).—At the students' infirmary at the University of California, in Berkeley, we frequently see cases of scabies. For many years our methods of therapy were similar to those recommended by Doctor Clark. Since Greenwood published in the *Journal of the American Medical Association* in 1924 "The Danish Treatment for Scabies," we have used exclusively this highly successful method of treatment. This ointment depends upon the production of hydrogen sulphid, which enters the skin and is lethal to the parasite. The ointment is applied carefully all over the body except the hair, and the patient is then confined to bed for twenty-four hours. The next morning the treatment is completed by a hot soapy bath and the wearing of clean clothes. Failures are exceedingly rare, and one treatment is sufficient. Care must be exercised to treat all other cases in the family. Protection against reinfection by boiling underclothes, sulphur fumigation of bedding, and treatment of contacts is essential.

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C. RAY LOUNSBERRY, M.D. (Medico-Dental Building, San Diego).—I have listened to Doctors Clark and Stebbins' paper on scabies with much interest, because we, as a profession, are prone to minimize the importance of ordinary diseases. Scabies has been a very prevalent disease since the war. We who were in the service would see whole companies of World War veterans infested with the itch mite. From our war experiences we have learned how to cope with this condition en masse. Now today we can profit by that experience, in our treatment, to some extent.

The Navy method of treatment was as follows: Routinely the men reported to the sick bay, complaining of the classical symptoms of scabies. Then a microscopic examination of the scrapings from a lesion was made to determine definitely the exact diagnosis in each case. The scabetic were then taken to a shower room and were given a hot bath and a scrub with tincture of green soap, after which they were told to rub into the affected areas sulphur in combination with balsam of Peru ointment. Then they were placed in the scabetic ward. Of course, all their clothes were removed and clean pajamas were given them; also clean bedding was provided daily. This treatment was continued from three to five days. At the termination of that time most of the uncomplicated cases appeared apparently well. Remember,

these cases were isolated. Care should be taken to determine whether or not the patient is sensitized to sulphur, because a sulphur rash could be severe.

In our clinical practice in southern California, where we are called upon to treat so many illiterate Mexicans, who live in hovels of filth, the problem is difficult. They do not follow out directions, and when they do they immediately reinfest themselves. We have printed directions, translated in Spanish, and written in English, which helps us a great deal in our ambulatory cases.

Practically all our cases in San Diego are complicated with impetigo, as well as other pyogenic forms of infection associated with sand flea, mosquito, and other bites—combined with boils. Thus we have a mixture of diseases which are very hard to treat, especially when the ringworm fungus is found.

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DOCTOR STIBBENS (Closing).—Primarily, we presented this paper to emphasize to the general practitioner the differential diagnostic points and the complications of the disease, particularly in relation to impetigo and other pyogenic infections. If this object has been attained we will feel that we have been amply repaid.

The Danish treatment, as cited by Doctor Legge, is a very valuable method of attacking the disease, but, unfortunately, cannot be used in treating the very young patient or in severe cases of impetigenous or secondary infection, without great danger of producing a very severe dermatitis.

In these cases we must first endeavor to subdue the inflammatory symptoms and then feel our way cautiously toward radical treatment of the disease by gradually increasing the strength of our parasiticides. These cases require application of boric acid lotion or weak liquor carbonis detergens at first and then, as improvement occurs, gradual change to betanaphthol or weak sulphur mixtures. Mercury in any form should be used with extreme caution if the lesions are extensive.

## THE DIAGNOSIS AND TREATMENT OF LUNG ABSCESS\*

By FRANK S. DOLLEY, M.D.  
Los Angeles

DISCUSSION by Philip H. Pierson, M.D., San Francisco; Harold Brunn, M.D., San Francisco; F. M. Pottenger, M.D., Monrovia.

FIVE years ago a patient harboring a lung abscess rarely reached the surgeon. Many abscesses remained undiagnosed that are now recognized and those found were treated expectantly with little or no thought of surgical intervention in mind. The mortality under medical treatment alone was from 60 to 90 per cent. Today, with proper and correctly timed surgical intervention, the death rate in the large clinics is from 32 to 45 per cent. The treatment of subacute and chronic lung abscesses is rapidly becoming surgical, and with improving technique the mortality is steadily decreasing.

### CAUSES OF PULMONARY ABSCESS

The causes of pulmonary abscess are most diversified. They can originate from the bronchi, blood or lymph. Very often the area involved heals without sloughing. Poor general condition and decrease in the bodily resistance contribute largely to lung cavitation. Diabetics, alcoholics and nephritics are particularly susceptible. Fol-

\* Read before the General Medicine Section, California Medical Association, at the Fifty-eighth Annual Session, May 6-9, 1929.



lowing penetrating wounds of the chest or even chest contusion, lung abscess is not uncommon. Aspiration of food or other foreign bodies leads frequently to lung abscess. In a strong young person sharp demarcation is the rule. The area is sloughed out, the sequestration is expectorated and smooth healing can occur. A pulmonary abscess following a metastatic infarct from an infected focus in some other region of the body in a patient exhausted from previous illness, tends not to be well walled off but to extend into the surrounding lung tissue. It is this type that is most unfavorable.

The majority of lung abscesses develop in connection with bronchopneumonia. Influenzal pneumonia is particularly liable to such a complication. In a pneumococcus inflammation of the lungs an abscess is seldom seen. In the fibrinous lung inflammation of the emphysematous, pulmonary abscess is not an uncommon sequela.

#### SYMPTOMS

The symptoms are by no means clear-cut. Diagnosis is not always easy. The history is of great importance and should be painstakingly obtained if the patient is suffering from pulmonary inflammation. A severe chest contusion might have caused a pulmonary hemorrhage with secondary infection and abscess formation. A history of choking while eating, or of unconsciousness from any cause may suggest the contributing factor. Often careful inquiry elicits a past history of sinus or throat infection, grippe, enteritis or furunculosis, from which even weeks later a metastatic septic infarct into the lung could initiate a lung abscess. Leg ulcers are particularly prone to be the seat of the original inflammation.

When a pneumonia does not undergo resolution, when fever and rapid pulse continue and when the cough, whether productive or non-productive, persists, softening of the lung tissues leading to abscess formation should be strongly suspected. Sudden profuse expectoration of purulent material is highly suggestive. If culture of the pus shows a mixed infection, the diagnosis is practically assured. Before the lung abscess breaks into a bronchus the cough is dry and more or less constant from irritation of the vagus nerve terminals in the bronchial walls. After bronchial communication is established there may be cough only as the abscess refills.

Parenthetically, it is of value to note in the differential diagnosis between empyema ruptured into a bronchus and lung abscess, that in the former condition the pus shows regularly a pure culture of some one organism and that this cough is generally constant rather than periodic as obtains with lung abscess.

The physical signs are extremely variable and seldom aid materially in the diagnosis. The finding of greatest significance is the variance in the auscultatory sounds over the suspected area upon change in the position of the patient. With the abscess containing fluid no sounds may be heard, but with change of the patient's posture the fluid may gravitate into another region,

giving râles and amphoric breathing over an area previously dull and silent.

#### DIAGNOSTIC AIDS

Aside from the history the most important diagnostic aid is fluoroscopy and x-ray films. Fluoroscopy should be done with the patient in the upright position if his condition possibly permits it. Films of the subject flat in bed are worse than useless. No fluid level can appear in this position. The shadows are vague and indistinct, more suggestive of broncho- or lobar pneumonia or empyema, than lung abscess. In the upright position a fluid level often appears, immediately simplifying the diagnosis. Under the fluoroscope change of position in the presence of a fluid level enables one to shift the air bubble above the fluid in various directions, thus definitely outlining the limitations of the cavity. Upright antero-posterior stereoscopic films and a single lateral one should always be taken, for they are almost an indispensable aid in abscess localization.

Lipiodol to delineate the abscess cavity is a material help. Theoretically it would seem easy for the bronchoscopist to find the particular lobe bronchus from which pus is issuing, inject lipiodol and at once by x-ray demonstrate the abscess. However, this does not often occur. The instruments have narrow lumina, the oil is thick, considerable pressure must be exerted to inject it and the portion of the lobe receiving the delineating oil becomes drowned. The fluoroscope reveals a rather solid wall of lipiodol conforming neither to the lung tree nor the supposed abscess cavity. It may or may not be the seat of the inflammatory process. Far more satisfactory is it for the bronchoscopist to inject through a larger instrument without pressure, the main right or left bronchus and allow the oil to gravitate into the various branches of the bronchial tree. It is seldom that oil is shown within the cavity itself, but often the surrounding uninvolved bronchi are splendidly disclosed so that by elimination localization may be greatly furthered.

In the region of the chest presumably involved an area sensitive to pressure can quite commonly be found, if the abscess be not deep within the lung. The author believes this to be one of the most reliable signs in the localization of a lung abscess. Pressure tenderness, if present, in conjunction with the other diagnostic procedures generally locates the abscess sufficiently to warrant approach at this spot. It is the failure properly to localize the abscess and, therefore, the failure in the operative treatment that has heretofore so dampened the ardor of the physicians for surgical consultation.

#### TREATMENT OF LUNG ABSCESS

The treatment of lung abscess now confronts us. Those who develop pulmonary suppuration are at first and properly under the care of a physician. During the acute stage before definite demarcation has occurred the treatment should continue medical. But when an abscess is definitely established, whether it is discharging through the bronchus or not, if the patient is not



steadily improving, the possibility of surgical intervention should be considered, not by the physician, but in actual consultation with the surgeon with whom in case of surgical intervention he would intrust his patient. There is one exception to the above statement of initial delay. In diffuse lung gangrene, immediate extensive thoracotomy is most emphatically indicated.

Despite the fact that the abscess has broken into a bronchus and its contents are being expectorated, if after six to eight weeks of bed rest, postural drainage and bronchoscopic suction evacuation, the cavity is not steadily decreasing in size and the patient improving, operation should be advised. When localized lung suppuration is suspected but no bronchial perforation has occurred and therefore no tell-tale fluid level is shown to make the condition evident, if the patient is becoming progressively weaker and his symptoms point strongly toward the sloughing of lung tissues, external drainage should be accomplished as soon as anatomical demarcation of the abscess is assured. This indication also appears usually six to eight weeks after the onset of lung inflammatory symptoms. This is not radical since surgery properly performed as to time and method has nearly bisected the mortality from lung abscess during very recent years. It is the protracted medical treatment that is often radical.

During the period of waiting for demarcation many abscesses heal spontaneously by expectoration. This is particularly true with an abscess developing during bronchopneumonia. After this initial period the percentage of spontaneous recoveries rapidly decreases. Upper lobe abscesses drain better, since gravity greatly aids. Collapse of the cavity walls, however, in these upper lobe abscesses is often prevented by adhesions of the pleura to the narrow rib-ring at the thoracic apex. Lower lobe abscesses are emptied by increased expectorative effort. In the latter the intervals between sputum production are longer and the amount of sputum greater.

The aspiration of a lung abscess for the purpose of localization is almost invariably contraindicated until the parietal pleura is exposed and definite assurance has been obtained that the two pleural leaves are adherent. An exploratory puncture without this assurance is extremely hazardous to the welfare of the patient. The needle withdrawn from the abscess is very liable to convey the infection into a pleura totally unprepared for bacterial invasion. Extensive infection of the pleura occurs, a so-called pleural sepsis follows and death is the usual ending. A small thoracotomy opening to drain this extremely septic material is not sufficient. To be life-saving, an extensive rib resection must be carried out at the most dependent part of the pleural space with gauze tamponade between the pleural leaves. Exploratory needling therefore is definitely excluded from our diagnostic armamentarium until we are actually prepared to evacuate the pus.

When operation has become the procedure of choice and the collection of pus has been located with as much exactness as possible in regard to

position relative to the chest wall, a local thoracoplasty is performed directly over the presumed site of the abscess.

It is important that rib sections be removed over an area definitely larger than that occupied by the abscess in order that there may be collapse of the pleura and adherent lung sufficient to aid in the obliteration of the cavity after its evacuation. It is far better to resect too many than too few ribs. The intercostal muscles, vessels and nerves together with the rib periosteum should be excised in order to reduce the postoperative pain from pressure of the drainage tube or gauze as much as possible. Without periosteal excision, rib regeneration often pulls apart the cavity walls again or prevents their coaptation.

If the pleural leaves are not firmly and broadly adherent they must be made so, provided the patient's condition permits it. It is much safer to do a two-stage operation, proceeding no further in the first stage than to expose the parietal pleura, and tampon tightly with gauze against the parietal pleura; and do the second stage eight to ten days later after adhesions have developed. If, however, immediate drainage of the abscess seems imperative, then one of two means may be employed to exclude the general pleural space. One may sew the parietal to the visceral pleura as far from the site of the proposed opening into the abscess as possible; or one may pack tightly with gauze between the pleural leaves at some distance wide of the abscess. The latter method has given much more satisfactory results and is accomplished in but a few moments.

Positive intrapulmonary pressure under gas and oxygen anesthesia is indispensable in the one-stage operation if the pleural leaves are not adherent. The mask about the patient's mouth and nose should fit tight enough so that the anesthetist can raise the pressure within the breathing bag sufficient to inflate the lung and bring it tight against the chest wall. When the parietal pleura is opened, collapse of the lung is thus prevented. Palpation of the lung thus somewhat inflated is rendered much easier. The anatomical relation of the area of the lung induration to the chest wall opening is more certain. Moreover the packing of the gauze between the pleural leaves about the abscess can be successfully accomplished only by positive pressure, since without this the lung under the influence of a large open pneumothorax collapses towards the mediastinum and is therefore inches away from the chest wall.

General narcosis should be limited to the shortest possible time. It is usually preferable to resect the ribs and expose the parietal pleura under local anesthesia, have the patient attempt to raise and expectorate what pus may have accumulated within his abscess cavity, then to proceed at once thereafter with gas and oxygen anesthesia under positive intrapulmonary pressure.

The choice of approach to the pulmonary abscess is important. Pus lying in the upper lobe is best reached from behind or through the axilla.



In the posterior approach for an upper lobe abscess, the second to the fifth ribs should be excised paravertebrally for six to fifteen cm. The scapula is abducted and drawn laterally. One then has an opportunity to examine the larger part of the lobe suspected of harboring the abscess. If the abscess lies anteriorly or laterally the axillary incision is usually the best. The arm is elevated and the second to fifth ribs exposed. There is little muscle in this neighborhood and the approach is comparatively easy. It is seldom necessary to open a lung abscess anteriorly. It is only indicated when the abscess is a cortical one in the anterior chest region. Lower lobe abscesses are the easiest to drain externally. The site of choice is also posteriorly. Usually the paravertebral incision with the removal of portions of the fifth to eighth, or sixth to tenth ribs is the most favorable one. A good view is afforded of the lower lobe and orientation then is not difficult. Often with an extensive abscess of the anterior or middle lobe, a transverse axillary incision with a second incision downward through the middle of its course affords the best exposure.

When the parietal pleura is thoroughly exposed and pleural adhesions are assured, then and then only is it permissible and advisable to explore with a needle. When the pus is found, entrance into the abscess is most safely effected with the thermocautery. Tearing of the lung tissues very greatly increases the danger of air emboli. Direct incision is not contraindicated, but hemorrhage is sometimes more difficult to control without packing. The danger of air emboli is greatly reduced if the patient is under positive intrapulmonary pressure when the lung tissue is entered, since positive pressure within the lung in a large measure excludes the possibility of the entrance of air into the open veins. The external wall of the abscess should be opened as widely as possible to insure healing of its walls from within outward. Gauze packing or rubber tubes wrapped in gauze allow the best drainage.

#### SUMMARY

The time allotted can permit no more than a very hasty survey of the treatment of pulmonary abscess. Medical and bronchoscopic treatments are of very definite value. Many cures are thus effected. These cures occur in a very great majority of cases, however, during the first eight weeks. Thereafter the percentage of complete recoveries markedly decreases and the mortality rate rises. If the pulmonary abscess is deeply situated within the lung, artificial pneumothorax is strongly indicated for trial. It often dramatically obliterates the cavity. If the pleural abscess is situated more superficially, artificial pneumothorax is a very hazardous procedure. Should perforation through the visceral pleura occur, pleural sepsis follows with its high mortality. A temporary paralysis of the diaphragm on the involved side, accomplished by crushing of the phrenic nerve in the neck, frequently relaxes the pulmonary tissues sufficiently when an abscess is discharging through the bronchus to effect a complete and permanent obliteration of the cavity.

This result is rarely achieved, however, except during the acute or subacute stage of the disease.

The internist should never desert his patient. Medical treatment is constantly required and the interests of the patient are best conserved by his frequent consultation with the surgeon during the patient's postoperative course. It is the consensus of opinion today among those who have had the most experience in its surgical treatment that during the period of development and anatomical demarcation a pulmonary abscess is best treated medically; but that after an abscess is definitely diagnosed and walled off, unless the patient is showing steady improvement, the best prognosis for lung abscess is by a rightly timed and carefully conducted surgical intervention.

1247 Roosevelt Building.

#### DISCUSSION

PHILIP H. PIERSON, M. D. (490 Post Street, San Francisco).—This paper of Doctor Dolley's has offered us a very clear and concise system of procedure in the diagnosis of pulmonary abscess and in its treatment. In this condition, the closest coöperation of the group, consisting of the bronchoscopist, surgeon and internist, is of utmost importance. If this coöperation and consultation begin early, they will be of more value than when asked for just before their particular services are given. Intensive medical treatment does not mean a passive attitude, waiting for nature to do everything herself, but it requires careful explanation to the patient about the type of posture most suited to him, the preference of circulating fresh air to merely open air, as to an easily digestible as well as a high caloric diet, particular care of his mouth and sunshine when this can be used locally with safety.

Artificial pneumothorax is very frequently suggested as a possible form of treatment, but it seems to me its usefulness is so limited, namely to central abscesses where dangerous bleeding is a part, as to be practically nil. These abscesses generally do well under posture plus bronchoscopy.

In acute abscess lipiodol gives very little information which is not gained from the pictures, as previously suggested. When the lipiodol is massed in one section of the lung, it may suggest the presence of an abscess where there is none (a matter discussed at some length by Mosher). When bronchiectasis has developed about a cavity, lipiodol is then helpful in detecting its amount.

Series of roentgenograms are of great aid in determining not only the ultimate prognosis, but the rate of progression of the disease condition. We have found lateral films of a great deal of value in properly determining the location and extent of these abscesses.

As has been said, intensive medical treatment greatly reduces the mortality in pulmonary abscesses, but at times too long a delay in resorting to surgery will allow the abscess wall to become so rigid that thoracotomy and even thoracoplasty will not be followed by collapse and it is to avoid this condition that the coöperation of the group is of utmost value.

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HAROLD BRUNN, M. D. (384 Post Street, San Francisco).—Doctor Dolley has given us a very clear and concise picture of lung abscess as we see it clinically, and has laid down some very important data for our consideration.

In our own work we find ourselves operating less and less for the acute abscess. Under proper handling we feel that a larger and larger percentage of these cases are cured by expectant treatment; carrying out a number of carefully planned procedures for each individual case. It is important, however, that if these procedures do not relieve the patient operation should



be undertaken, as Doctor Dolley points out, before the abscess becomes chronic.

The treatment for an acute and a chronic abscess is therefore very different. In the acute abscess we attempt to establish drainage by posture, by bronchoscopy and by artificial pneumothorax, and we choose the method or methods depending upon the case and its progress.

Of these methods probably the bronchoscope is the most important in removing plugs or granulations or opening up a bronchus with cocaine and adrenalin, allowing the discharge to be liberated. At times also we use in addition after such bronchoscopies carbon dioxid and oxygen to increase ventilation of the lung, which in turn tends to keep the cavity empty. We try to be extremely careful not to allow time to slip by until the patient shall have become so seriously weakened by continued infection as to make recovery difficult, even by operative interference.

The course of many of these abscesses is very erratic and each case requires individual study. We feel that one can be very easily stampeded into a too early operation, and if this occurs death may ensue from the dislodgment of emboli which might otherwise have cleared up under some carefully provided system of drainage. Those patients that have hemorrhage along with expectoration are the ones that are the most trying and in these we attempt an early pneumothorax. Bronchoscopy here becomes more dangerous and operation also carries with it a higher mortality.

In conclusion we wish to repeat that our operations have diminished more than half and we believe we are clearing up our cases in a much quicker time by correlation of the different methods of producing drainage of the abscess.

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F. M. POTTENGER, M. D. (Monrovia).—Doctor Dolley's paper on the diagnosis and treatment of lung abscess presents to us an excellent discussion of one of the most difficult problems in chest disease. The old method of draining an abscess as soon as it is diagnosed is wrong. During the acute state of an abscess it should always be given an opportunity to heal, and operative procedures should not be undertaken until the abscess is walled off. When the acute pathologic changes have come to a standstill, and the abscess is walled off, then operative procedures should be undertaken, if deemed necessary.

In some of these cases pneumothorax will compress the tissue and bring about a satisfactory healing. In other cases it seems to be insufficient and wholly fails to control the pathology.

If after a few weeks' medical observation the abscess does not show a tendency to heal, the surgeon should always be called into consultation.

Aside from pneumothorax, in the treatment of early abscess, drainage may be assisted by posture and also by bronchoscopy. Where the abscess drains slowly, bronchoscopy has often given marked relief. Unless free drainage is established and maintained there is no possible chance for healing.

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DOCTOR DOLLEY (Closing).—I feel that little need be added except by way of emphasis on the points so well brought out by the discussers. I shall close with but a word of further caution in regard to the employment of artificial pneumothorax in the presence of acute or even chronic lung abscess if a recent flare-up involving the surrounding lung tissue is evident. I am firmly convinced that even if a lung abscess be apparently deep-seated there is grave danger of acute pleuritis with overwhelming toxemia developing (under artificial pneumothorax treatment) either through needle injury to lung in an infected area or by actual extension of the inflammatory process to the visceral pleura with subsequent rupture into pneumothorax cavity and that only in the chronic or late subacute lung abscesses, when all signs of surrounding pulmonitis have disappeared, is this procedure safely indicated for trial.

## CARCINOMA OF THE CERVIX—ITS SURGICAL TREATMENT\*

By HANS VON GELDERN, M. D.  
San Francisco

DISCUSSION by William H. Gilbert, M. D., Los Angeles; Emil G. Beck, M. D., Chicago; C. G. Toland, M. D., Los Angeles.

PREVIOUS to the comparatively recent introduction of radiologic therapy, surgery had been considered the method of choice in the cure of uterine cancer. As treatment with radioactive rays was developed and perfected, however, many of the strong advocates of radical surgery were gradually won over to radiologic therapy on the basis of the excellent results reported and the almost complete absence of primary mortality. Gynecologists are still divided as to the preferable procedure, especially in the early cases of carcinoma of the cervix.

### EARLY SURGICAL PROCEDURES

The first systematic attempts at the surgical cure of cervical cancer consisted of high amputations of the cervix and vaginal hysterectomies. Freund in 1878 introduced the removal of uterine cancers by the abdominal route and had quite a following, but this operation in the hands of others was decidedly unsuccessful and surgeons again turned their attention to the original vaginal technique, obtaining far better primary results. During this same period Byrne introduced cautery amputation of the cervix, reporting a number of cures. Operators, however, soon realized that their failures were the result of incomplete excision of carcinomatous tissue, and a number of surgeons, notably Ries, Clark and Werder, again became interested in the abdominal approach, developing a radical procedure which was perfected and popularized by Wertheim. Werder later abandoned the operation he originally proposed for a combined vaginal and abdominal cautery extirpation.

### RADICAL OPERATIONS

The original Wertheim operation consisted of the removal of the entire uterus, tubes, ovaries, parametria, paracervical tissues and part of the vagina, along with an extensive dissection of the regional glands. At that time the only hope for cure was dependent upon dissecting wide of the carcinomatous extensions and the technique carried with it a high mortality. In the earlier years of radical surgery many hopelessly advanced cases were operated upon, but in subsequent years the pendulum gradually swung back to less radicalism, with more careful selection of patients for operation and improvements in technique.

P. Werner of the II Frauenklinik, Vienna, recently described his present technique. He warns against immediate preoperative manipulation or examinations, and advises spinal anesthesia. Werner emphasizes the importance of after treatment, especially the care of the bladder, and carries out postoperative roentgen radiation on all patients as soon as possible after the operation.

\* Read before the Obstetrics and Gynecology Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



Coincident with the development of the radical abdominal technique, Schuchardt announced an extended vaginal operation which was improved upon by Schauta. This improved operation embodies the same principles of block dissection of the pelvic organs and their ligamentous connections, but fails to eradicate involved glands distant from the parametria. Contamination of the operative field, a great source of danger in the abdominal operation, is avoided by sewing together a vaginal cuff about the infected cervix. The operation is facilitated by a paravaginal incision, which shortens the vagina and makes the parametria accessible.

Statistics indicate that the incidence of injuries to the adjacent organs and the percentage of five-year cures are about equal for either type of operation. Most surgeons prefer the Wertheim technique for its accessibility, but in general agree that the radical vaginal operation is especially adapted to patients who are suffering from constitutional diseases, to the obese and the aged. The primary mortality following the Schauta operation is only about one-third that attending the Wertheim. The former technique, in the past, has been condemned by many because of its inability to reach metastatic glands, but at present few surgeons still advise the routine removal of lymph glands, as the experience of Schauta, Weibel, and others has been that few patients with lymph gland metastases have been cured by surgery. Gellhorn points out that each method has its special virtues and that gynecologists should have at their command the technique of both operations.

Whereas many surgeons, especially in America, have stopped operating altogether for cervical cancer, others still adhere to the radical abdominal technique either alone, or in combination with radiation, and a few advocate simple panhysterectomy after complete preoperative radiation. Stoeckel and Toth routinely use pre- and post-operative radiation in conjunction with the Schauta operation. Keene, Gardner, Kuhn, and others favor cautery amputation followed by radium, especially in early cervical cancer.

#### SELECTION OF PATIENTS FOR OPERATION

Before radium entered the therapeutic field the aim of surgeons was to increase the number of operations for cancer of the cervix to a maximum. At that time 50 to 90 per cent of patients were operated upon. At present operability implies that the growth is of such limited extent that a permanent cure may be reasonably expected. In general less than 20 per cent of patients with cancer of the cervix are now considered operable. Most gynecologists now agree that the criteria for classifying patients as operable are normal mobility of the uterus, flexible and noninvaded fornices, lack of parametrial infiltration, patency of the cervix, afebrility and absence of pathogenic organisms in the cervical secretions.

An increase in the number of surgical cures will depend on earlier diagnoses, all border-line

cases being reserved for radium. Some investigators contend that surgery should be reserved for patients upon whom a positive diagnosis can be made only through biopsy examination. However, Bonney, whose operability rate is about 55 per cent, has obtained remarkable results, curing 33 per cent of patients with carcinomatous lymph glands. He claims that the bars to operation are deep and extensive infiltration of the bladder or rectum and obstruction of the ureters, and has overcome involvement of the whole vagina by means of his supra-Wertheim operation. Notwithstanding the contention that radium cures as many operable cases as surgery, it is recognized that there is a group of adenomatous cancers, comprising about 5 per cent, which fail to respond to radium therapy and are, therefore, best treated by surgery if within the limits of operability.

#### PROGNOSIS

The grouping of cervical carcinomas proposed by Schmitz segregates these tumors into four groups, according to the clinical extent of growth. It is agreed that tumors belonging to Group 1 are clearly operable and in general offer a good prognosis, providing there are no surgical contraindications and that a skillful radical operation is performed. Patients belonging to Group 2 offer a questionable prognosis and should no longer be operated upon, while those classified in Groups 3 and 4 are definitely considered inoperable. Experience has made it apparent that the clinical extent of growth is of greatest prognostic indication as far as surgery is concerned.

Martzloff recently made a study of the histopathologic material obtained from a group of patients upon whom radical surgery had been performed, in order to determine the criteria essential to establish the prognosis following operative treatment. His classification of epidermoid cancers, based upon the predominating type of cell, and grouping according to the degree of cellular differentiation, was used; a classification not unlike in principle to those of Broders and Schottlaender and Kermauner. Each type, as well as the adenocarcinomas, was studied separately with respect to the duration of symptoms, clinical extent of growth and the ultimate results. Symptoms of over eight months' duration put the cases with spinal and transitional cell types beyond the hope of operative cure, while those exhibiting the more malignant spindle cell type were found hopelessly advanced before this time. Metastases and paracervical extension indicated a poor prognosis in all types. Of the operable cases the adenocarcinomas and spinal cell growths showed the greatest incidence of permanent cures, and the spindle cell types the least.

Most investigators, however, place more emphasis on the clinical stage than upon histologic grouping, when surgery is used, while Wintz, Plaut, and others claim that there is no reliable basis for histologic prognosis in cervical cancer. Efforts have been made to establish a prognosis from a study of biopsy specimens, but the recent investigations of Martzloff have shown that about



one-third of the material studied failed to indicate correctly the predominating variety of cancer cell in the parent tumor.

#### PRIMARY MORTALITY AND COMPLICATIONS

Generally speaking, the primary mortality attending radical surgery has shown a marked decline, due to a reduction in operability and improvement of technique, but figures from different clinics show wide variation. This may be accounted for on the basis of the types of cases selected and the methods of operative management. Twenty years ago an operative mortality of 20 to 25 per cent was considered the average for experienced surgeons. Statistics collected by Jacobson in 1911, by Janeway in 1919, and Heyman in 1927 show an average operative mortality of 19.5, 18, and 17.2 per cent respectively, and Lynch's figures, based on over three thousand Wertheim operations performed by European and American surgeons, showed 16.5 per cent. Thirty per cent of Wertheim's first one hundred cases died, the mortality being later reduced to 10 per cent. Werner reports that the present operative mortality for cervical cancer in Wertheim's clinic is between 5 and 6 per cent. The percentage of operative deaths in Franz' clinic has dropped from 23 to 14 per cent and at Johns Hopkins from 14 to 7 per cent. Recently Zweifel, Weibel, Graves, and Jeff Miller report from 4 to 7 per cent. Operators using the Schauta technique now have a primary mortality of between 3 and 4 per cent. German surgeons have reduced the death rate by the use of spinal anesthesia. A reduction of surgical mortality is most essential to operative treatment in its competition with radiologic therapy.

Improvements of technique and more limited selection of patients for operation have also brought about a reduction in postoperative complications. At Johns Hopkins the following complications occurred in order of frequency: Infected wounds, vesicovaginal and ureterovaginal fistulae, thrombophlebitis, peritonitis, nephropathies, pulmonary complications, rectovaginal fistulae, and intestinal obstruction. Shock, peritonitis, pulmonary and urinary tract complications were responsible for the deaths.

#### END RESULTS

In order to evaluate with some degree of accuracy the results obtained in the treatment of cancer of the uterus, Winter proposed as a standard of curability, freedom from recurrence for a period of five years. From 2 to 6 per cent of cervical cancers recur after five years, but this is offset by the difficulty of tracing over a longer period. Before the advent of radium, when surgery was the only means of cure, a calculation of absolute cures seemed the fairest means of determining results, as operators differed so widely in their methods.

Heyman's statistics, collected from twenty operative clinics, showed an average absolute curability of 19.1 per cent and an average of 16.3 per cent for seventeen clinics using radiologic treatment. These figures can hardly be compared

as the radium statistics represent different material and more recent work.

With radiologic therapy now a competitor of surgery, the percentage of relative cures has become a better index as to the results of either type of therapy in similar cases. Some 3659 extended operations, collected from the literature by Heyman, showed an average of 35.6 per cent recovery. No doubt a considerable proportion of these cases could not be considered operable in the sense with which we use the term today. Five-year end results, collected from twelve radiologic clinics, showed an average of 34.9 per cent in operable and border-line cases. Wille, Weibel, Warnekros, Faure and Bonney, enthusiastic advocates of radical abdominal surgery, in their more recent reports show ultimate cures in early cases ranging as high as 75 per cent, quite comparable to the results obtained in similar cases treated radiologically in the clinics of Heyman, Ward, Bailey and Healy, and Doderlein. It must be remembered, however, that these surgeons are unusually skillful and have developed the technique over a period of years before such results were obtained. A number of surgeons have obtained better results after using pre- or postoperative radiation in conjunction with their radical hysterectomies. The use of radium in combination with cauterization or electrocoagulation is in its experimental stage. Five of six early cases treated by cauterization and radium, reported by John G. Clark, have recovered. Extensive cauterizations and starvation ligations as palliative procedures in advanced carcinomas have been largely superseded by radiologic therapy.

#### STANFORD CLINIC OBSERVATIONS

Of eighty-seven patients with carcinoma of the cervix treated in the Stanford women's clinic from 1912 to 1924, twenty-six were radically operated upon and of these 38.5 per cent remained free of recurrence five or more years. The operative mortality was 11.5 per cent with no operative deaths among fifteen patients treated between 1918 and 1924. The absolute curability was 13.8 per cent. Most of the patients were treated with radium, preoperatively, four to five weeks prior to operation, postoperative radiation being reserved for cases in which there was incomplete extirpation or in which recurrences developed. Palliative procedures used in the treatment of inoperable cancers consisted of the use of acetone, Percy cautery, Pacquelin cautery, and radiation. There was no apparent relation between the duration of symptoms and the clinical extent of the disease. Since 1925, with the hope of improving results, radium has been used in this clinic almost to the exclusion of operative interference, following the cross-fire technique used at Radiumhemmet. Thus far too few patients have been followed over a sufficiently long period to draw conclusions.

#### CARCINOMA OF THE BODY OF THE UTERUS

Many of those who have completely abandoned operative procedures for cancer of the cervix admit that surgery is indicated in carcinoma of the fundus. Controversy still exists as to the



extent of removal. Although Weibel and Peterson obtained their best results by using the radical technique, the present method of choice is total hysterectomy with bilateral adnexectomy. It is an accepted fact that this method offers from 65 to 80 per cent permanent cures. Some European operators favor vaginal hysterectomy for body carcinoma. Eymers, Polak, Crile, Ward, Healy, and others advocate total hysterectomy and salpingo-oöphorectomy along with preoperative and also postoperative radiation if necessary. The uterus may be removed either a few days or from four to six weeks after thorough intra-uterine radiation.

It is all important that an early diagnosis be made. Diagnostic curettage must be followed by intra-uterine radium unless laparotomy is to be performed at once. The prognosis in general is better than in cancer of the cervix, due to a relatively late penetration and involvement of the surrounding structures and a lower degree of malignancy. Mahle studied these tumors histologically and found that cures were much more frequently obtained in the less malignant types. Norris and Vogt, in a study of 115 cases of body carcinomata, report a primary mortality of 7.3 per cent, with 50 per cent of operative cases and 35 per cent of those treated by radium surviving a five-year period. Van S. Smith and Grinnell report five-year cures in 45 per cent of a similar group treated by surgery. They express the opinion that radium is inferior to hysterectomy in the treatment of fundus cancers. The results, with operative treatment on 323 operable body carcinomas collected from eight clinics, showed an average of 58.8 per cent recovery, whereas 118 operable cases treated with radium showed 47.5 per cent. Sixty per cent of the operable patients treated at Radiumhemmet were cured, and on the basis of these figures Heyman concludes that radium can well compete with surgery in the treatment of body carcinomas.

#### CONCLUSIONS

1. There is a general tendency toward the limitation of radical surgery to carefully selected early cases of carcinoma of the cervix.
2. The clinical extent of growth is the greatest single prognostic indication following extended operations.
3. Experienced surgeons are now operating for cancer of the cervix, with a primary mortality of less than 8 per cent.
4. The best surgical results are obtained when radiation is used in conjunction with extended operations for cancer of the cervix.
5. Panhysterectomy and double salpingo-oöphorectomy in conjunction with radiation is the method of choice in the treatment of carcinoma of the body of the uterus.
6. Until further comparative statistics based on the treatment of early cervical carcinomas are available, it is well, before we abandon surgery altogether, that we keep an open mind on this phase of the subject.

490 Post Street.

#### DISCUSSION

WILLIAM H. GILBERT, M. D. (746 Francisco Street, Los Angeles).—Cancer of the cervix and cancer of the breast still remain debatable questions. Rapid metastasis in both these locations means a high percentage of recurrences and deaths. Unquestionably, cancer is a curable disease when discovered in its early stages. Surgery, the cautery, or radium will cure at that time. It seems to me that the best we can look for in the treatment of advanced cancer of the cervix is a 25 per cent cure. This is the figure supplied by Haydon of Stockholm, Sweden, and probably represents the highest percentage of cures of all types of cases and applies to the use of radium and x-ray radiation exclusively. Surgery has never been able to equal this record in the type of cases alluded to. In the surgical treatment of early cancer of the cervix the figures are in favor of operative procedure. After all has been said and done, we come back to the question of the personal equation. Much of the good results obtained through surgery depends upon the judgment and skill of the operating surgeon. This is equally true of the radiologist. He must have had a wide range of observation and experience in the use of radium and x-ray. I have used all the accepted methods. Percy's cautery, in early cases in which I resort to surgery, is my method of choice. I believe the radical hysterectomy made with the cautery knife is the best technique to follow. In more advanced cases I have cooked the cancer with the cautery and have seen the patients die of septicemia afterward. I have also seen the same result after large doses of radium. I believe the radium technique, as followed by Ward of the New York Woman's Hospital, has given me the best results. How to cure cancer is a tremendous question of great interest to the human race, and a gigantic problem for the medical profession to solve. Much water has run over the dam and much will follow before the question is answered to the satisfaction of both the public and the profession. At the present time I am inclined to believe that metastatic cancer patients will live longer and be more comfortable if let alone. When cancer becomes a general infection, any local treatment we may use will be of little avail.

Education of both the laity and profession as to the necessity of early diagnosis and treatment will do much toward decreasing the mortality rate of cancer.

To summarize, I would say that at this time an early diagnosis, a splendidly qualified surgeon, and an expert radiologist are absolutely necessary to the cure of cancer.



EMIL G. BECK, M. D. (Chicago, Illinois).—Doctor Von Geldern has given us an unbiased opinion on the relative value of surgery and radiotherapy in the treatment of carcinoma of the cervix, and has clearly defined the indications for each, or of a combination of the same. Whenever a discussion on carcinoma of the cervix takes place, our main object is to find out whether surgery or radiotherapy offers the best chance for permanent cure or the longest period of prolongation of life. Statistics from American clinics and from abroad indicate that the status is still in favor of surgery combined with preoperative and postoperative radiation.

Radiation without surgery in cervical carcinoma has, however, gradually gained in popularity, as the surgeons become convinced of its merits. It has one thing in its favor, namely, practically no mortality, and less expense to the patient.

The comparative value of surgery or radio therapy cannot be estimated by merely counting the deaths or by the five-year end results. We must take into account that the worst cases fall into the hands of the radiologist. Many cases in which merely an exploration is done and regarded as inoperable apply to the radiologist and thus the fatal end results is charged to radiology and not to surgery.

It is, however, most essential that the surgeon and the radiologist coöperate in order to give the patient



the best chance for recovery. If I were asked to mention the most essential requirements in cancer therapy I would unhesitatingly say, coöperation between surgeon and radiologist.

In cancer of the cervix we should really expect more favorable results than in other parts of the body. It is in the earlier stages accessible to direct radiation similar to the superficial epitheliomata of the skin or lip. It is only when the body of the uterus and the intrapelvic glands are affected that the case becomes uncontrollable. We must bear in mind that unless we can destroy the last cancer cell we may expect a recurrence. In other words, every retained cancer cell after an operation is a potential recurrent cancer. Since the individual cancer cell is not palpable or visible during an operation, the surgeon is not always able to tell whether any cells have been retained in the wound and thus it is essential that post-operative radiotherapy should be carried out most efficiently. Fortunately this can be carried out with greater ease in carcinoma of the cervix because the tube of radium may be placed in direct contact and into the cavity of the uterus. The additional x-ray treatment has also been efficiently worked out by experts.

One word about the correct and early diagnosis. Not every ulceration of the cervix in a woman who has borne children and who is suffering from an endocervicitis, is a carcinoma. In suspicious looking ulcers we resort to biopsy. In the smooth granulated ulcer I have usually resorted to a test by treating them with 20 per cent silver nitrate and bismuth application. The nonmalignant ulcer will usually yield to this treatment, but if it does not, then it becomes a suspicious case, and the biopsy clears the diagnosis.

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C. G. TOLAND, M. D. (1930 Wilshire Boulevard, Los Angeles).—In a consideration of the treatment of carcinoma of the cervix it is impossible to state definitely that any one procedure is the best. Some of our leading gynecologists favor the use of radium alone, others frequently employ a radical operation, many advocate irradiation and operation combined, and a few use the cautery. Where there is such a diversity of opinion it can be assumed that no treatment is entirely satisfactory.

If the surgeon could be reasonably certain in the early cancers of the cervix, that the malignant cells had not extended into the parametrium; and that no general or local contraindications existed to an operation; then a radical operation would be the method of choice.

Unfortunately the number of patients with an early cervical carcinoma who present themselves for examination is extremely small. The onset of the disease is insidious and in the early stages the symptoms are not sufficiently striking to force the patient to submit to a rather indelicate examination.

Where the malignancy has extended beyond the cervix, an operation has very little to offer the patient. There is considerable danger of disseminating the cancer cells as a result of the operative trauma, and even in skilled hands there is some immediate mortality.

The combination of surgery and irradiation undoubtedly has produced excellent results, but there is some question as to whether the same results could not have been obtained with radiation alone.

In our own work the results from surgery have seemed so uniformly unsatisfactory that we have abandoned operative procedure entirely. For the past eight years all cases, whether early or late, have been treated by the radiologist exclusively. The combination of x-ray and radium has been employed, and even in the advanced cases rather surprisingly good results have been obtained, with the additional feature of practically no mortality.

In this field, as in operative technique, a high degree of skill and experience is necessary. Troublesome abscess formation, a prolonged proctitis, or other undesirable complications may follow too enthusiastic irradiation.

When the carcinoma has confined itself to the fundus of the uterus we have not found radium so effective. A radical operation has given the patient the best chance for a cure. The abdominal total hysterectomy has been the safest and most satisfactory.

## THE LURE OF MEDICAL HISTORY

### A NOTE ON THE MEDICAL BOOKS OF FAMOUS PRINTERS\*

#### PART I

By CHAUNCEY D. LEAKE, Ph. D.  
*San Francisco*

GOOD printing has always exercised its own peculiar fascination on those who love the beautiful, and with recent historical and artistic interest in the subject, as evidenced by the enthusiasm for finely printed private press work, it has become dignified to a fine art. It is one of the delightful sidelights of the historical study of medicine to follow along the developments in the art of printing. Almost all phases of the history of printing as a fine art may be traced in medical books.

#### THE ORIGIN OF PRINTING

In ancient Greek and Roman times, and all through the Middle Ages, books were painfully and slowly copied out by hand by professional scribes. Naturally this was a poor process, and very expensive. Only the very rich could afford books made by such a method and, of course, there was great restriction in the distribution of such as were copied. The manuscripts were usually richly bound and carefully preserved, for they represented wealth in view of their difficulty of production. In many libraries of the period these manuscript books were tightly chained to reading stalls and indeed this same practice continued in some cases after the publication of printed books.

It has always been supposed that the Chinese invented the device of movable type by which repeated impressions of the same figure might be made. It can only be proved that they used seals for stamping in quite the same way that the Romans and many other peoples used similar stamps. It remained for western ingenuity actually to invent printing.

The first printing effort to be successful was that initiated by Johan Gutenberg of Mainz in Germany. Here, after great labor in cutting the wood blocks to imitate as closely as possible the hand-made letters of the manuscripts, he published with Johan Fust, the first printed book, a great folio bible, between the years 1450 and 1455. The method of producing this book was kept secret. It was hoped that people would simply believe that the book had been put out in large numbers by the employment of a great many

\* This preliminary study was inspired by the notable collection of medical classics exhibited by Dr. LeRoy Crummer at the University of California Medical School in February, 1929. Helpful stimulus has also been received from conversations with Dr. Sanford Larkey. It is hoped that their influence may maintain a lively interest in some of the more artistic aspects of medical publication among California physicians.



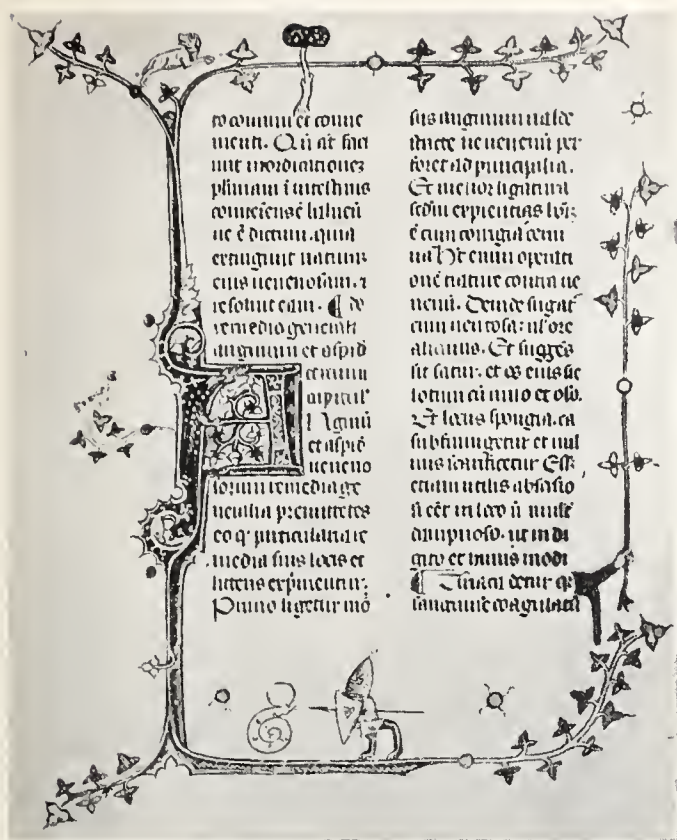


Fig. 1.—Illuminated page from manuscript of Juan Gil of Zamora, *Opus contra Venena*, written in Spain about 1400. Early printed books attempted to imitate manuscript work such as this.

scribes, and that the printing would appear to be real hand copying. All the early printed books attempted to imitate as far as possible the features of hand copying.

Along about 1465 Mainz was sacked by invaders in the sporadic warfare of the period and the printers were scattered over Europe. Even before this, however, Gutenberg and Fust had quarreled and had separated. Many of the better printers were attracted by the artistic patronage and appreciation of handicraft in Italy so that the best early printing developed from the presses in Florence and Venice.

Soon now a great flood of books were offered to the public, and at prices cheaper by far than could ever have been made by hand lettering. Education of the masses began in full blast. Naturally the wealthy aristocrats objected, and at first many obstacles were placed in the way of the printers. Permission had to be obtained for printing, and all sorts of difficulties were brought up. The wealthy continued for a time to have their books hand-lettered and bound as sumptuously and as richly as could be.

#### THE FIRST MEDICAL BOOKS

Medical manuscripts, of course, were among the most precious of those handed down and copied through the ages. Most of them are now in the great European libraries, and their comparison is one of the hardest tasks of the scholars. With the introduction of printing, hand sheets calling attention to certain ways of maintaining health in plagues or epidemics were circulated during the seventh decade of the fifteenth cen-

tury. Not counting the works of Pliny and Aristotle, which were early printed, one of the first medical books was a little tract on poisons written by Peter of Abano, and published for the use of the medical students at Padua in 1473. But the first real medical book of any consequence to be published was the magnificent folio of Aulus Cornelius Celsus, *De medicine libri octo*, 1478. This was issued from the press of Nicolus Jensen of Florence, in Italy, and became famous as one of the first books to introduce the new Roman letter. As was said before, the first books attempted to imitate as closely as possible the rather thick, heavy hand lettering of the scribes. Books which continued to use this heavy sort of type are now said to be printed in **black letter**. The type was usually what we refer to commonly as "Old English." The plain slender grace of the ancient Roman lettering carved on the monuments and inscriptions all over the Roman Empire was not adopted into book printing until the time of Nicolus Jensen. Jensen's Roman type has become very famous, and within recent years some of the leading typographers, such as Bruce Rogers, have come back to the use of modified Jensen type.

This book of Celsus is one of the real classics of medicine. Celsus was a Roman gentleman who apparently lived during the Augustan era, and who wrote a number of books on various aspects of the classical Roman civilization. He was what might be called the first encyclopedist. His book on medicine was not popular at the time it was written, but with the advent of printing became one of the chief medical authorities, and went through some one hundred and five editions, and is still widely read for its classical charm and its good common sense. It was the chief medical work written in Latin. Most of the other authorities appeared in Greek, and one of the tasks of the Renaissance scholars was to get a good Greek manuscript and make a readable Latin translation from it.

#### THE INCUNABULA

An interesting arbitrary convention among bibliographers assigns special value to any book printed before 1500. Such a book is called an *incunable*, or "cradle book," and most careful pedigrees have been worked up for all such books. For example, an exact census is kept of all such books which may have found their way into the United States.

The leading authorities on incunabula were Hain and Copinger, who tried to make a complete check list with accurate descriptions of all the incunabula. Booksellers and bibliophiles use such a check list to "collate" copies they have. Sir William Osler made a similar check list for medical incunabula up to 1480. He lists some one hundred and seventy medical books printed up to that time. The chief ones are Aristotle, Avicenna,



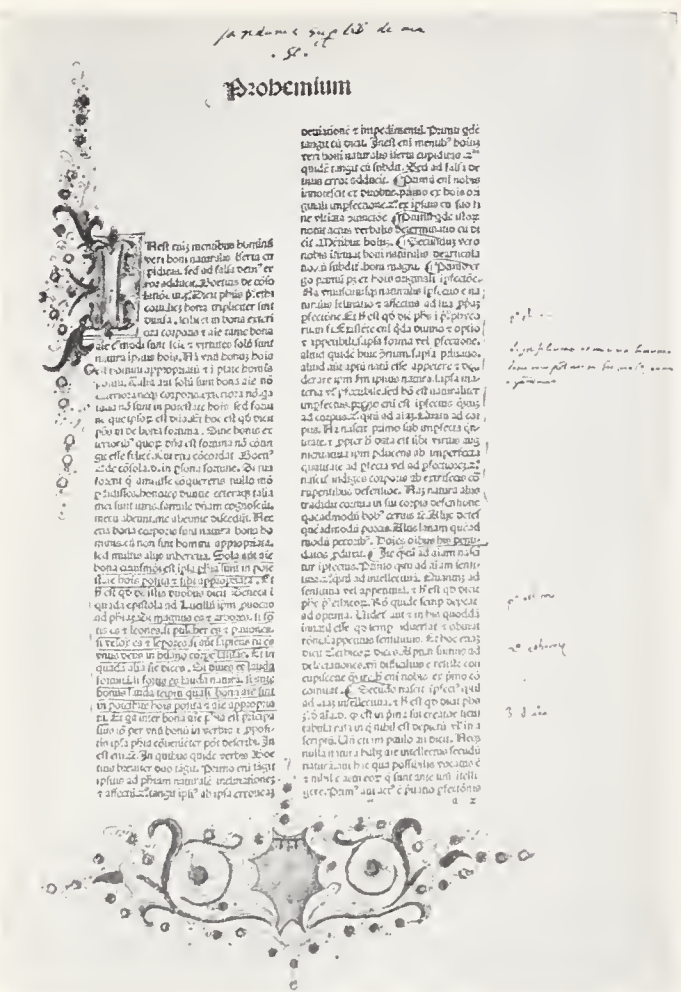


Fig. 2.—First page of Johannes de Padua, *Tres libros de anima* Aristotelis, published in Venice, July 1, 1480, by Johannes Colonie. Note how type and illumination imitates manuscripts of period.

Dondis, Celsus, Dioscorides, and Pliny. It is remarkable that the real Renaissance authorities in medicine, Galen and Hippocrates, were not printed until after this time.

Check lists of medical incunabula in leading American medical libraries have been published from time to time in *The Annals of Medical History*. The chief collections of medical incunabula in this country are in the Surgeon-General's Library and in the College of Physicians in Philadelphia. Sir William Osler's collection is with his historical books at McGill. In the recently issued *Bibliotheca Osleriana* there is a full description not only of Osler's incunabula, but also of all the finely printed books in his great collection.

#### THE FIRST ILLUSTRATED MEDICAL BOOK

In 1493 there appeared in Venice a huge folio volume called *Fasciculus Medicinæ*, which purported to be a collection of little medical works assembled by a certain Johannes de Ketham. It included the anatomical notes of Mundinus, a celebrated Bolognese professor, the first to revive formal dissection, and a tract or two by Rhazes, the great Arabian physician. This book at once became popular, and in 1500 and later in 1513, was republished in most magnificent form. The publisher was the celebrated Gregorius de Gregoris, one of the best of the early Venetian printers, and his fame was muchly enhanced by

this beautiful book. It has been called the finest illustrated book up to the time, and it was the first illustrated medical book.

The illustrations are very clear, simple, architectural line-drawings, which have been transferred to wood with consummate skill. The "statuesque ease" of the figures, and the firm, simple outlines of the settings, have won for these pictures the admiration of all artists.

There are in all ten cuts in the book. There are the traditional "wound men" and "bleeding men," and also the traditional circle of urine glasses. These pictures, in crude form, had been circulated for some time as separate sheets, and showed the places on a man where he might be bled, and the colors of the different types of pathological urines, or the kinds of wounds a man might receive. But the best of the pictures are those of the professor in his chair, supposed to be Petrus de Montagna, reading to his students from some authority, while his prosecutor points out on a cadaver below the parts of the body exposed by the menial barber. The other is the very beautiful sickroom scene, in which an elderly woman is shown reclining on a high bed while one servant smooths the sheets and another brings food. Below are two pages holding incense tapers, for the patient has plague, while a physician feels the pulse of the sick woman, meanwhile holding an aromatic sponge to his nose to keep away the infection. This picture is reproduced for this article.

Gregorius really fostered illustrated medical books. He used some of his cuts for several different books. For instance, in 1502, he issued a collection of some of the supposed medical books from the famous school of Salerno, under the name of Articella, or Johannitus, and called *Liber Ysagogue*. This carried a cruder picture of the "bleeding man," and is here reproduced in order to illustrate the kind of picture this famous representation was. The various points on the



Fig. 3.—Sick room scene from Ketham's *Fasciculus Medicinæ*, Gregorius, Venice, 1500, the finest illustrated book to that date.



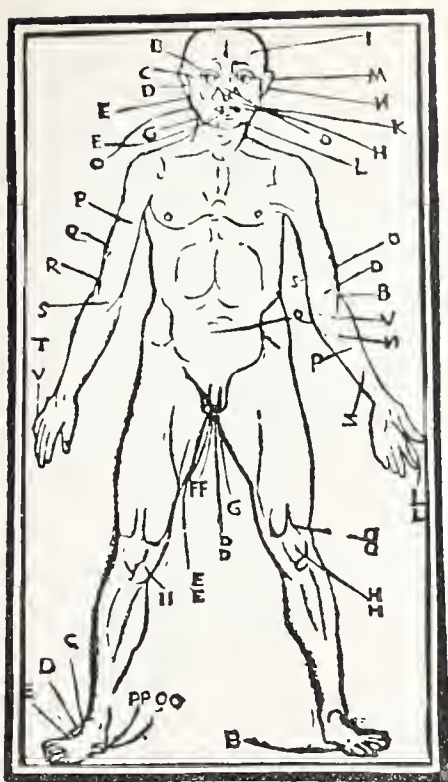


Fig. 4.—"Bleeding man," from Articella, Liber Ysagogue, Venice, 1502.

body show the places from which blood may be drawn.

#### THE ALDINE PRESS

The original printers did not use a title page. To have done so would have spoiled the illusion of the work having been hand-lettered like a regular manuscript. The custom developed of putting a little note, called a *colophon*, at the end of the printing, telling by whom the work was done, where, and when. Later the printers began to use a distinctive mark, or printer's device, with which to identify the books made by them. One of the first of these famous devices was the anchor and dolphin of the great house of Aldus Manutius, the founder of a family of celebrated Venetian printers. He was also among the first to use a title page. This was a very simply printed front page telling what the volume contained and also carrying the device as an identification.

But the Aldine Press is chiefly renowned for its introduction of *italic* type fonts. The older type fonts were based on the hand-lettering of the scribes or upon the carvings of the ancient Roman stonecutters. The beautiful *italic* style is said to have originated from an attempt on the part of the Aldine Press to imitate in type the delicate handwriting of Petrarch, the great Renaissance humanist and author.

Among the famous Aldine medical books is an early edition of Celsus, printed in 1528, entirely in *italics*. This is one of the first medical books to have a title page. With the clarity and brilliance of its type, and the fine quality of the paper used, it is indeed a book well worth cherishing.

Another famous book from the Aldine Press is the first Greek edition of Hippocrates. This appeared in 1526, and contained all the supposed works of Hippocrates in the original Greek. The character of the Greek type used became famed

as the prototype of similar fonts employed by later printers.

The Aldine Press achieved great renown through its publication in magnificent format of the chief classical writers of antiquity. The publication of these books not only was a commercial success, but it also contributed in a marked degree to an appreciation on the part of the people at large of the finer literary remains of the ancients.

#### GREAT FRENCH PRINTERS

Printing did not make a good start in Paris; the city was too much under the control of the conservative aristocrats. In Lyons, however, nearer the artistic centers of Italy, fine printing early flourished.

Most of the early sixteenth century books of Lyons, however, were still printed in black letter. The newer fonts were slow to be introduced. Among the prized early medical books from Lyons are various works of Symphorien Champier, 1472-1539, the great French humanist who did so much to give the real meaning of Galen and Hippocrates, and who, using his name as a clue, perhaps, tried to harmonize, or produce a symphony from the conflicting ideas of Galen, Hippocrates, Aristotle, and the Arabs. This work was the octavo *De medicinis claris scriptoris*, issued by Etienne Gueynard, in 1506.

Gilbert de Villiers was another important Lyons printer, who issued the beautiful second edition of Dioscorides as a quarto in 1512. This carried one of the best sixteenth century woodcuts on the title page, a variant of the familiar scene of an author presenting his book to his patron. Another important work published by Villiers was the *Opera Parva* of Rhazes in 1511. This again was in the convenient octavo size.

The earlier printers published their books in the regular large folio size of the ordinary manu-

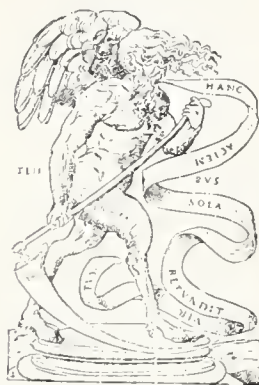
IN HOC VOLV MINE HAEC  
CONTINENTVR.  
AVRELII CORNELII CELSI MEDICINAE  
LIBRI. VIII. QVAM EMENDATISSIMI,  
GRAECIS ETIAM OMNIBVS  
DICTIONIBVS RESTITVTIS.  
QVINTI SERENI LIBER DE MEDICINA  
ET IPSE CASTIGATISSIMVS.  
ACCEDIT INDEX IN CELSV M, ET SERENVM SANE QVAM COPIOSVS.



Nevevortum decreto, ne quis aliquo in loco venetiae ditionis  
hos libros imprimat, impressosue alibi  
vendat, autum est.

Fig. 5.—Title page to the 1528 Aldine edition of Celsus, showing the Aldine device and italics.

La dissection des parties du corps  
humain diuisee en trois liures, faictz par Charles Estienne  
docteur en Medecine. avec les figures & declaratiō des in-  
cisions, compolees par Estienne de la Riuiere Chirurgien.



Imprime a Paris, chez Simon de Colines.

1 5 4 6.

Auec priuilege du Roy.

Fig. 6.—Title page to Charles Estienne's *La dissection des parties du corps*, published by Simon de Colines in Paris, in 1546.

scripts. It was the Lyons printers who popularized the more convenient smaller sizes. Books are usually classified by size according to the number of times the printed sheets are folded in binding. Just folded once they are "in folio." Folded to give four pages, they are "in quarto"; to give eight pages they are "in octavo," and so on.

The most famous Lyons printer was Gryphius, who appropriately enough used a griffin as his device. In 1532 he published in 12mo one of the first authoritative Latin translations of the Greek of Galen and Hippocrates, made by the great Francois Rabelais, author of the first novels, *Gargantua* and *Pantagruel*. Rabelais lectured for many years on medicine, and is even supposed to have written his witty novels in the attempt to make his sick patients laugh and thus the more easily get well.

In these handy little formats most of the ancient medical authorities were issued from the busy press of another more strictly medical printer in Lyons. This was Rovillius, whose device may be seen on many of the early Renaissance medical texts. He put his books out especially for the use of students—that is, in a handy form, and at a little more reasonable price than that charged for the more magnificent tomes of other printers.

With Simon Colines, Paris came into its own in the fine art of printing. The bootlegging of Lyons books into the capital made it apparent that there was real demand for good books, and Colines secured the ecclesiastical permission to do his best. He issued many texts of Galen, with translations made by the best literary men of the time, among them Thomas Linacre, who founded

Note: Pictures of the title pages of many of the books mentioned above may be seen in Sir William Osler's *Evolution of Modern Medicine*, New Haven, 1920. In the huge catalogue of his library, compiled by W. W. Francis, Archibald Malloch, and L. L. Mackall (*Bibliotheca Osleriana*), one may find interesting notes on many of the significant finely printed medical books. One may also turn to the many beautiful catalogues issued by Maggs Bros. of London, R. Lier of Florence, and Hertzberger of Amsterdam, for items about the medical books of the famous presses of the world.

the Royal College of Physicians of London, and Guintier of Andernach, one of the teachers of Vesalius. He also issued in 1537 one of the rare little medical tracts of Michael Servetus, who discovered the pulmonary circulation, and who was burned under Calvin at Geneva in 1553 for his theological ideas. One of Colines' most ambitious medical books was the *De dissectione partium corporis humanis* of Carolus Stephanus, or Estienne (1506-1564), who was himself a member of a great family of Parisian printers, and who antedated Vesalius in trying to make a real study of the human anatomy. Unfortunately this fine folio did not have the same artistic plates that made Vesalius' work so successful, and it was not published until two years after the appearance of Vesalius' book.

The Stephanus family, Robert, Charles, and Henri, published several fine medical works. The first folio of Alexander of Trales, in Greek text, came from their press in 1548. Henri himself wrote and printed one of the first and handiest medical dictionaries, the *Dictionarium medicum* in octavo in 1564.

University of California Medical School.

(Part II of this paper will be printed in the February issue.)

## CLINICAL NOTES AND CASE REPORTS

### EXTENSIVE FRACTURE OF SKULL\*

#### REPORT OF CASE

By S. NICHOLAS JACOBS, M. D.

AND

LAWRENCE M. TRAUNER, M. D.

San Francisco

THE following case is interesting from the standpoint of the great amount of damage sustained by the skull, yet resulting in complete recovery of the patient.

F. L., male, white, age twenty-two, on February 12 was thrown to the street from a motorcycle, striking his head against the curbing. He was rendered unconscious for about five minutes, after which he was semistuporous. Upon removal to the Sutter Hos-

\* From the Sutter Hospital, San Francisco.

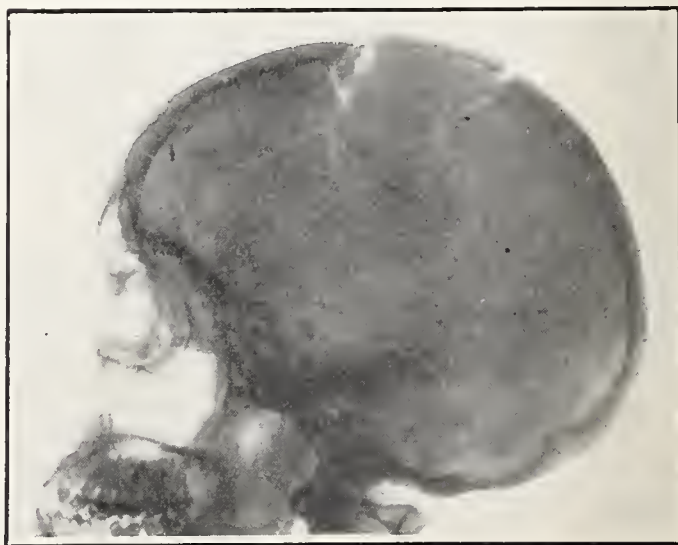


Fig. 1.—Lateral View



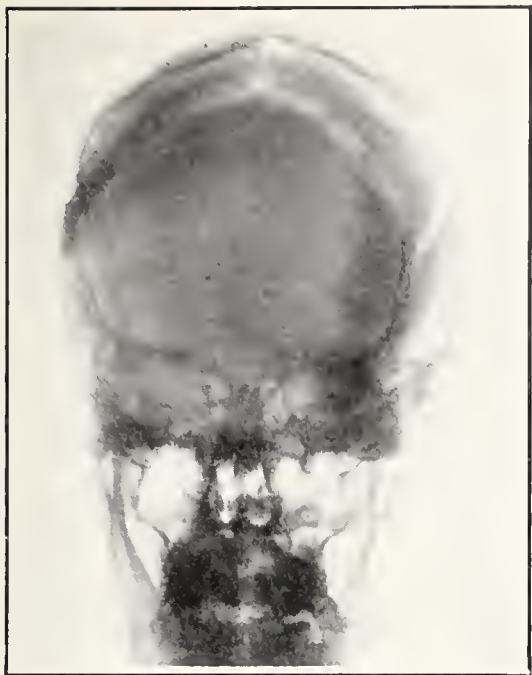


Fig. 2.—Posteroanterior View

pital it was noted that there were multiple lacerations about the scalp and face with evidence of considerable hemorrhage. There was no bleeding nor escape of cerebrospinal fluid from the ears, nose or mouth. Respiration was regular and quiet, 18 per minute; pulse regular, 80 per minute; blood pressure, 120/80. There was no motor disturbance of the face or limbs. Deep and superficial reflexes were all present and normally active. Pupils were equal, regular, and reacted to light. There was some vomiting, but not of the projectile type.

Three to four hours later some symptoms of acute intracranial pressure developed: the blood pressure showed a marked fluctuation ranging from 90 to 130 systolic and 10 to 68 diastolic, with a consequent variation of the pulse pressure; the pulse and respiration became slower, but remained regular. This condition lasted five days, after which the symptoms subsided, the blood pressure, pulse, and respiration remaining at constant levels. Temperature was subnormal upon admission and normal thereafter.

X-ray pictures taken upon admission showed (Figs. 1 and 2) a very extensive comminuted fracture involv-



Fig. 3.—Showing a large ovoid defect in the right parietal bone where the comminuted and overlapping fragment had been removed.

ing both parietal bones. On the right side a fragment had been depressed into the cranial cavity. There was also a depression of the upper fragment of the parietal on the left side. There was a marked diastasis of the coronal suture and of the sagittal suture anteriorly. This diastasis no doubt accounted for the symptoms subsiding after the immediate effects of shock: the patient had decompressed himself.

The patient's general condition improved steadily under absolute bed rest and sedatives. At this time the question arose as to the advisability of surgical intervention, it being felt that the depressed piece of bone would irritate the cerebral cortex. However, due to the extreme shock sustained, it was deemed advisable to wait one month before removal was attempted. This was concurred in by Dr. H. Naffziger, who saw him in consultation with us. The patient improved steadily during this interval of time and operation was then performed. The fracture and overlapping bone were exposed through an inverted U-shaped skin flap. After removing the overlapping portions of bone, the dura was found to be intact but markedly thickened and congested. X-ray pictures were taken four days after the operation (Fig. 3).

Recovery was uneventful and the patient was allowed to leave the hospital on the fourteenth day after operation. The trephined area in the right parietal region was protected externally by an aluminum plate. He did not complain of any headache or dizziness and was mentally alert. He has continued to improve up to the present time, seven months after the accident, and no signs of cerebral irritation have developed. The trephined area has filled in to within a space one centimeter in diameter.

1065 Sutter Street.

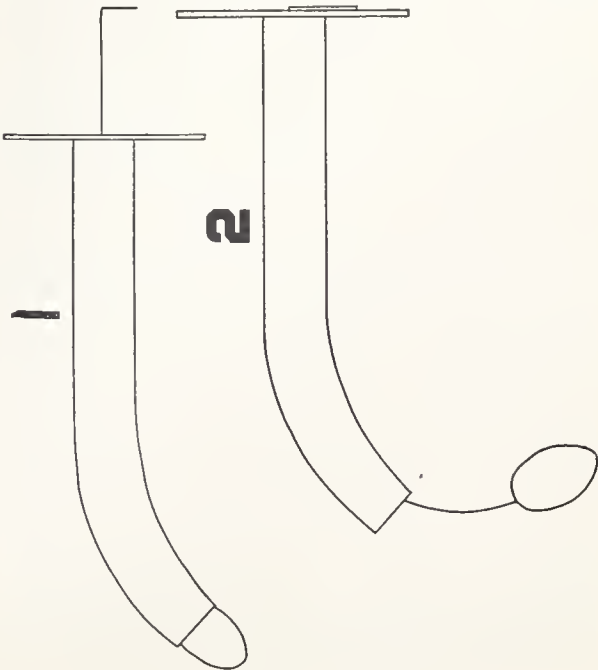
### SELF-RETAINING INTRA-UTERINE PESSARY

#### REPORT OF CASE

By OLGA MCNEILE, M. D.  
*Los Angeles*

AFTER eighteen years' experience with different forms of self-retaining pessaries, it has finally been my privilege to find one that is nearly perfect.

The glass stems used in the past were satisfactory except for the danger of breaking (I have removed several broken ones). The aluminum, gold, and silver ones caused a cervical irritation



Self-retaining intra-uterine pessary

in a very short time, and had to be introduced with the use of capsule which contaminated them. All the old types were made in a limited number of sizes which often were not adapted to the individual anatomical structure.

I mentioned my problem to a friend of mine, Mr. J. J. Cantor, a designer of medical appliances, who thereupon devised a pessary which I have used during the past six months. Indications for its use were dysmenorrhea, with or without an antelexion, and sterility. This pessary can be introduced when the patient is in the office. Slight dilatation may be necessary. The pessary can be altered to various lengths to suit individual requirements.

The pessary holds itself well in position and does not cause any irritation or odor, even after being worn for six months. After the usual dilatation under an anesthetic, the cervical muscle tissue is torn, often causing a secondary contraction. By wearing this type of pessary, from one to six months, the cervical canal becomes permanently dilated.

#### REPORT OF CASE

Mrs. X.—Introduced pessary after usual dilatation. She had borne two children. Operation for cervical repair followed. This repair had a contracted cervical canal so the ordinary uterine sound would not pass; and also had caused severe premenstrual dysmenorrhea and sterility. Pessary was easily removed after having been worn for six months. At no time did it cause erosion of the cervix or any leukorrhea. Six months have passed since its removal, the dysmenorrhea no longer exists, and the cervical canal is of normal diameter.

2007 Wilshire Boulevard.

### SURGICAL CATASTROPHES FOLLOWING OVERLOOKED STONE

#### REPORT OF CASE

By STANLEY H. MENTZER, M. D.

San Francisco

**D**-65787, white, male, age forty-one, garage mechanic.

*Family History and Past History.*—Unessential.

*Present Illness.*—Patient had been perfectly well until one year ago when, after no previous indigestion or other suggestive signs of biliary disease, he suddenly developed an attack of severe pain in the right upper quadrant which radiated posteriorly; some nausea but no vomiting, no jaundice, no clay-colored stools. Since that time he had had characteristic gall-bladder distress with true qualitative food intolerance; flatulence and belching thirty to sixty minutes after meals. No chills or fever.

*Operation (Elsewhere).*—Under ether anesthesia, a relatively noninflammatory gall bladder containing two cholesterolin-rich stones was found. During the cholecystectomy the gall bladder was ruptured. Some bile-oozing occurred. The abdomen was closed with a Penrose drain.

*Interval History.*—Patient was practically well for one year except for slight jaundice, which was intermittent. There was no severe pain, no chills or fever, until the second attack of distress one year after the first operation. Then rather suddenly the patient developed severe pain in the upper abdomen with deep jaundice, chills, fever, and clay-colored stools. A diagnosis of common duct stone was made and at operation I found a stone in an anomalous cystic duct which ran parallel to the common duct for most of its length and drained into it close to the ampulla of Vater. Signs and symptoms of acute duct obstruction

were, therefore, due to the extraneous mass, *i. e.*, the stone within the cystic duct pressing on the common duct. The stone was removed and a catheter sutured into the cystic duct for drainage. The common duct was open and thoroughly explored, and no stones were found.

*Postoperative Course.*—Patient drained bile freely and had an uneventful convalescence until the fourteenth day, when he got up out of bed. He had been walking about the ward approximately half a day and felt reasonably well, when he suddenly fell over in a faint which, he stated later, had been induced by severe upper abdominal pain. He rapidly went into shock, and four hours later I performed an exploratory operation. Preoperative diagnosis of bile peritonitis or mesentery thrombosis was made. The abdomen, however, was filled with serosanguinous fluid, four quarts of which were removed. Small areas of fat necrosis were observed in the omentum and transverse mesocolon and the diagnosis of acute hemorrhagic pancreatitis was obvious. Literally fistfuls of pancreatic tissue were scooped from the tail and body of the pancreas. Abundant Penrose and gauze drainage was effected from the sloughing area about the pancreas through the transverse mesocolon and anterior abdominal wall.

Patient had a stormy convalescence characterized essentially by vomiting and by digestion of the abdominal wall, due to pancreatic juice. This was controlled more or less by Fuller's earth dressings and later by beef juice and hydrochloric acid dressings.

Three weeks later a secondary closure of abdominal wall had to be performed. Patient was discharged from hospital three months after the second operation. There was still slight drainage through the abdominal wall. A month later drainage had stopped and patient was practically well—as he has remained twelve months after his discharge from the hospital. There are no signs of pancreatic insufficiency.

*Note.*—The case is of unusual interest because of: (1) The surgical catastrophes following overlooked stone; (2) Anomalous course of cystic duct; (3) Development of acute hemorrhagic pancreatitis; and (4) Recovery from this lesion after early surgical intervention.

450 Sutter Street.

Mme. Curie Here for Second Gift of Radium.—America has been recently hostess to the greatest woman scientist the world has ever known. Mme. Marie Curie, co-discoverer of radium, has come to accept a second gift of a gram of the precious substance from her friends and admirers in this country. When the first gram was presented to her in 1921, she turned it over to the Curie Institute of the University of Paris. The second gram will be given to the Warsaw Cancer Hospital, which since 1921 has rented a gram, Mme. Curie herself paying the rental with the income of a money gift she received with the first gram of radium. Warsaw is Mme. Curie's native city, although she has worked and lived most of her life in Paris. Mme. Curie and her husband, Pierre Curie, discovered radium but refused to make any personal profit from their discovery. They gave it to the public together with the methods they evolved for producing radium. These same methods are in use today in the radium industry. For years these great and generous scientists struggled with a meager income and without even an adequate laboratory. Pierre Curie, struck by a truck, died in 1906 without ever having a proper laboratory in which to use his great talents. Mme. Curie finally acquired the laboratory, planned too late for her husband to enjoy, in the Curie Institute. However, the small supply of radium in her laboratory was needed by the government during the war, and after the armistice she found herself without any of the precious substance. Then her admirers and friends in America came to the rescue with the gram of radium and the money which was meant to make living conditions easier for her. Characteristically, she used it to rent radium for the Warsaw Cancer Hospital.—*Science Service.*



# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

## THE CAUSES OF ANGINA PECTORIS

ROBERT WILLIAM LANGLEY, LOS ANGELES.—We are still far from having an exact conception of the mystery of pain in angina pectoris. Assuming, with MacKenzie, that the pain is an expression of heart muscle fatigue or anemia, the causes then are those which produce degenerative changes in either the heart or blood vessels or both. A definite symptom complex arises on the basis of the above pathological changes, and this we call angina pectoris.

No doubt true angina may occasionally be found on the basis of spasm of the vessels at the base of the heart and theoretically upon the basis of a spasm of the coronary vessels, but on the whole, actual pathological changes tending toward the production of sclerosis in these vessels are to be found in the great majority of cases.

The time-worn expression "the wear and tear of life" while not conveying a great deal to the average layman must certainly be considered an important causative factor in angina pectoris. The stress of the busy commercial world, the tremendous pressure and worry to which so many individuals are subjected constantly, are very important causative factors. When these factors are combined with prolonged irritation, such as repeated bacterial or parasitic invasion, overindulgence in alcoholic stimulants, tobacco and other toxins, high blood pressure and its consequent degenerative changes, the true manifestations of angina pectoris are frequently found. The incidence of this affection is greater by far in individuals with highly organized nervous systems whose lives show achievements in fields of mental endeavor. Certain classes apparently are affected more than others. The occurrence among Jews is very common while rather uncommon in the negro, for instance.

MacKenzie, after analyzing hundreds of cases, divided them into five groups as follows:

1. People in advanced life, about fifty-five and over, in whom the changes in the arteries are leading to a deficient supply of blood in all the organs, and in whom the arterial changes are more advanced in the heart.

2. People in whom the arterial changes are proceeding in the heart with greater rapidity and the disease is not capable of being checked and a fatal issue speedily follows.

3. People with damaged valves, especially aortic regurgitation.

4. People whose hearts are embarrassed by having to labor against arterial destruction, as

in chronic disease of the kidney with high blood pressure and damaged arteries.

5. A small indefinite group comprising rare conditions impossible to classify.

It will be seen from this classification that MacKenzie gave very little credit to acute cardiac irritants or toxins giving rise to true angina pectoris. It is quite true that he discussed a group of cases giving rise to atypical manifestations similar to angina pectoris which he chose to call pseudo-angina, truly an unfortunate term. Angina pectoris is a real entity, according to our present conception, and the pathology does not permit the recognition of this false type. Attacks of angina are frequently precipitated by taking food. This is especially true if the individual attempts physical effort shortly after taking a meal. It becomes necessary to insist upon this relation of food and effort to the pain of angina, for many patients, and even some doctors, consider the signs very certain evidences of indigestion.

\* \* \*

JOSEPH M. KING, LOS ANGELES.—Much has been written and many speculations indulged in regarding the exact causation of that symptom complex called angina pectoris, and while the true pathology of any condition and its etiology are of the utmost importance, yet our chief concern as bedside practitioners is the correct diagnosis, prognosis, and treatment.

Several heart conditions give rise to anginal pain, and when a patient presents himself it is wise to differentiate these if possible, even when he has as symptoms only the classic triad of substernal or more rarely precordial pain, with radiation to various parts of the body but chiefly the left shoulder and arm, and a sense of impending death during the seizure. Syphilis of the aorta, weakening as it does the resistance of the vessel wall, presents a stretching which often gives rise to a true anginal symptom complex. In this connection it is well to remember that the Wassermann test is not always positive in syphilis of the blood vessels, and in suspicious cases not only should it be repeated but the history should be thoroughly considered and very careful x-ray studies made for possible widening of the vessel. In this way only can one avoid the unpleasant awakening a few years later to the fact that the pathology presented has led on to aneurysm, untreated.

It is well also to remember that the substernal pain may be very low or even absent, and that the radiation of the pain is variable. Due to epigastric

or abdominal distress angina has not infrequently been mistaken for acute gall-bladder disease, gastric ulcer, or even acute perforation from ulcer, renal colic, or acute appendicitis. But a careful consideration of the history, the absence of fever, the normal leukocyte count, the presence of respiratory difficulty, and the age of the patient will usually serve to rule out acute abdominal conditions. The diagnosis of "indigestion" when made on an elderly patient who has distress on exertion after a hearty meal should be looked on with grave suspicion. In fact, if pain in the chest is clearly related to exercise, especially if associated with a full stomach or mental emotion, it should be regarded as anginal unless proved otherwise.

While many emotional states may be accompanied with seeming distress, it is certainly misleading to term them "pseudo-angina" or "false angina." It is also a cloak for our lack of exact knowledge of the particular case, for, as Potain has said, "There are no false diseases; there are only false diagnoses." Many of the attacks termed pseudo-angina are in reality the early manifestations of a malady which will ultimately claim the patient's life. It must be remembered that angina may run a much longer course than was formerly supposed and that many patients suffering with angina have very mild attacks for years. We must also remember that severe anginal attacks, leading even to death, may not be accompanied by severe pain.

On the other hand, now that the laity has become so conversant with the symptoms of various diseases, many neurotic individuals present themselves with a history difficult to evaluate. A sufficient study of the patient, however, serves to show his emotionalism. If the physician is so fortunate as to be present during one or two of these attacks, which seldom give the impression of true pain, he will usually have no difficulty in ascribing these cases to psychic phenomena.

Finally we should not overlook the toxic anginas brought on by tobacco, and possibly occasionally by tea or coffee. These are very easy to determine. The giving up of the supposed deleterious substance is followed very promptly by a cessation of the attacks.

\* \* \*

HARRY SPIRO, SAN FRANCISCO.—In a case of suspected angina pectoris the history is of the utmost importance. A patient may have physical signs, laboratory signs, and x-ray signs showing that an aortitis is present, that a degree of myocardial disease is present, or that hypertension or hypotension exists with no symptoms of pain. That patient has not angina pectoris. His prognosis is better than that of another patient with identical physical and laboratory findings who complains of pain in the region of the heart coincident with exercise and distinct relief by rest. This latter symptom is of utmost importance and almost pathognomonic of angina pectoris.

The points in the history that indicate a true angina are: first, pain with exercise, and second,

relief of that particular pain by rest. I do not agree with the author who speaks of "angina pectoris without pain"; I know a patient may have a coronary artery thrombus and no pain.

Of more than ordinary importance is the character of the pulse during an attack of angina pectoris. Very often a physician is led to question the presence of an attack of angina pectoris because the patient has a moderately slow, fairly strong and perfectly regular heart beat during the attack of pain. He may have observed his patient between attacks of pain and noted that the pulse is practically the same as during the attacks of pain. This ordinarily is the rule. It is exceptional (to be noted later), to find a variation in the pulse during an attack. The above character of the pulse is not indicative of the mildness of the condition. A "good" pulse during attacks is not safe datum upon which to base either diagnosis or prognosis.

When, however, in an attack the pulse rate is very fast or the volume or size very small, or the volume very changeable, when the pulse seems to fade out and get stronger again under the fingers, the patient is in deadly peril and the probabilities are that this attack of angina pectoris has been caused by a fresh coronary artery thrombus. When during an attack the pulse becomes small in volume and remains so for days and then develops irregularity, even extrasystoles, death may be imminent. When following an apparent recovery from an attack of angina pectoris produced either by an irritable aorta, a spasm of the coronary, or coronary thrombus, the pulse remains rapid, the patient feels well and anxious to get up, he is still in danger and should not be permitted to get up until the pulse rate has lowered permanently to around eighty-four.

Pain in the heart region, not distinctly related to exercise or relieved by rest, but associated with palpitation coming on without apparent reason may be indicative of ventricular tachycardia. During an attack of ventricular tachycardia the type pulse is a very, very fast run of short or long duration, immediately followed by a slowing of rate and then an apparently rapid increase. At the apex beat, when a rapid ta-ta-ta is heard as fast as can be counted, an exact diagnosis is imperative, and an electrocardiogram should be made. Not infrequently a patient has attacks of pain in the region of the heart or under the sternum, unrelated to exercise or to excitement but to an attack of palpitation of very rapid heart action of which the patient is conscious. This may be merely an arrhythmia of some sort which if relieved may permanently cure the patient of attacks of so-called angina pectoris. This arrhythmia may be either extrasystoles, auricular or ventricular, in series, causing tachycardia or the above mentioned ventricular tachycardia, both of which conditions are frequently and brilliantly relieved by quinidin.

I believe there is a relationship between the degree of pain and the prognosis, that is, the greater the pain the more dangerously ill the



patient; the easier to produce pain the more dangerous; the length of time the pain lasts—the longer the duration of pain the more severe the case; the quicker the relief with drugs the less dangerous the case; and attacks of pain markedly increased in frequency call for extreme caution; however, some patients only have one or two attacks of pain and then death.

\* \* \*

J. MARION READ, SAN FRANCISCO.—If every patient with albuminuria had Bright's disease, if every one with a murmur had endocarditis, and if precordial pain radiating down the arm always meant angina pectoris, etc., the diagnostic problems of the internist would be greatly simplified.

While true angina pectoris describes a fairly definite clinical picture there are no characteristic physiologic or anatomic changes found ante- or postmortem. It is probably because of this fact that the term "angina pectoris" has been used to describe almost all precordial or substernal pain radiating down the left, or right arm, or both.

When used in this sense the term really represents a symptom complex rather than a clinical entity. But as bedside physicians, it is in this guise that diagnostic problems present themselves to us.

While the greatest number of disease states in which this sensory symptom complex occurs are cardiac, or circulatory, it may be found also in mediastinitis, herpes zoster or, perhaps more frequently, in the radicular syndrome.

Typical anginal pain may occur in paroxysmal tachycardia, or anemia (especially the pernicious form), and in hypothyroidism. In all of these the heart itself may be organically sound, but the seat of the pain is nevertheless in the heart. Typical anginal pain may occur also in aortic insufficiency. Anginal pain occurs in coronary artery disease, including thrombosis and in true angina pectoris. There may be some question as to whether or not the same pathologic changes underlie both diseases, but I refer to true angina pectoris to designate the clinical picture described by William Heberden, who chose the term "angina" because of the sensation of pressure or constriction which is such a prominent symptom of this condition, and which the term really means. Heberden wrote, "The seat of it and the sense of strangling, and anxiety with which it is attended, may make it not improperly to be called angina pectoris."

But by long usage the term "angina" has come to be translated *pain*, rather than *suffocation*, and there are described under the heading of angina pectoris almost every cardiac affection associated with pain. For purposes of prognosis, treatment and further study of cardiac disease characterized by pain, it seems logical to restrict the term "angina pectoris" to the small group of cases which so clearly fit the description given by Heberden, namely, those whose attacks are produced nearly always by exertion, are accompanied by an alarming sensation of suffocation, pain, and

impending death, in whom the attack ceases with absolute immobility and who usually die suddenly.

It seems probable that the pain which occurs in true cardiac affections (excluding pericarditis and aortitis) is in the great majority of cases due to anoxemia of the heart muscle, either relative or absolute. Disease of the coronary arteries, anemia, and hypotension, all predispose to myocardial anoxemia and all these may, singly or in combination, be factors in precipitating attacks of angina pectoris.

Despite the same age incidence and the frequent necropsy finding of coronary artery changes, there is an additional nervous factor which plays a prominent part in angina pectoris. Brain workers, those with highly organized nervous systems, the "high strung," nervous, emotional and mentally active individuals seem predisposed to this dread disease. It occurs in almost epidemic form following financial crises, earthquakes, wars, and other calamitous happenings. It is much more frequently encountered in private practice than in clinics or hospitals for the poor. The same cannot be said of coronary thrombosis, which seems to strike rich and poor alike. Incidentally, the latter disease may occur without pain, although the accompanying objective signs are numerous, while in angina pectoris these are usually few, if any, while the subjective manifestations take first rank among those of all other diseases.

In the last twenty years the work of Herrick and others has established coronary thrombosis as a clinical entity and its subjective, as well as objective, manifestations are usually distinguishable from true angina pectoris. I cannot, therefore, agree with the previous writer when he says that an "attack of angina pectoris has been caused by a fresh coronary artery thrombosis."

The action of nitrites in angina pectoris and the seemingly favorable results which have attended cervical sympathectomy in some cases are features which warrant further consideration and tend to distinguish this disease from coronary thrombosis.

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WILLIAM DOCK, SAN FRANCISCO.—The occurrence of substernal (usually not submammary) distress, on effort, excitement, or exposure to cold, which is relieved by rest (often in the erect posture) or by nitrites, is sufficient for a "working diagnosis" of angina. If the pain occurs more after meals, on ascent but not on the level, and radiates into arms or upper abdomen, the impression is strengthened. Absence of all physical evidence, by x-ray, electrocardiogram, blood pressure, and physical examination does not alter the diagnosis. The pain may be partly abdominal and accompanied by nausea, but the relation to effort is typical and of the greatest importance.

Similar pain, of longer duration, and even occurring at rest may be due to paroxysmal tachycardia, thyroid disease, profound anemia, aortic stenosis or insufficiency, or to occlusion of a coronary artery, and should be sharply differentiated from pure angina pectoris.

The prognosis varies with frequency, severity, and duration of disease. The longer the disease



has lasted without increase in severity the better the prognosis, and the greatest care should be given to those who have had only a few attacks. Very severe attacks may recur for many years and hence no absolute prognosis can be given. Certain physical findings: pulsus alternans (as noted in taking systolic pressure); gallop rhythm on exercise; hypertension increased during attacks; abnormal ventricular complexes in the electrocardiogram, all suggest a shorter course. There is no marked correlation between senile sclerosis of the aorta, which Doctor Spiro includes in the x-ray diagnosis of "aortitis" and severity of heart disease. Anatomically the root of the aorta and coronaries may be severely damaged, even by syphilis, with no change in the arch, and severe sclerosis of arch and descending aorta occur often with the root of the aorta and coronaries undamaged.

As to therapy, rest (especially after meals), moderation in eating, drinking, and exercise are of greatest importance. The most useful drug is nitroglycerin, to be taken under the tongue for attacks of pain, or on occasions such as stair-climbing, sexual intercourse, etc., which predispose to attacks. Theobromin in ten-grain dose three times a day for prevention of attacks occasionally gives a satisfactory result; theocin and euphyllin but rarely succeed when this fails, but should be tried. Superior cervical sympathectomy is often effective and is less dangerous than other types of operative treatment.

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Blindfolded Pilots Fly Spiral Courses.—Experiments conducted have demonstrated that, when blindfolded, an airplane pilot will nearly invariably show the same tendency to deviate from the straight path of flight and take up a spiral one, that a blindfolded person does when in motion on the ground, it was stated September 7 by the National Advisory Committee on Aeronautics.

The statement in full text follows:

Tradition says that the normal tendency of a man who is walking without visual reference, as when lost in a forest or in a dense fog, is to take a circular path.

This traditional tendency has been investigated experimentally and reported upon exhaustively by Dr. Asa A. Schaeffer of the zoological laboratory of the University of Kansas. He finds that, whether walking, swimming, rowing a boat, or driving an automobile, the tendency of a blindfolded person is always to follow a spiral path.

Such a tendency would naturally be of greater importance in flight than perhaps anywhere else, and it was the intention of these experiments, carried on by the National Advisory Committee for Aeronautics at Langley Field, Virginia, to determine whether the same tendency normally appeared in the piloting of aircraft.

For the purpose of these experiments, a dual control VE-7 airplane was used. The subject pilot was placed in the front seat, which was located approximately at the center of gravity of the airplane. In this position the subject pilot was less influenced in piloting by the accelerations. A safety pilot, who also served as observer, occupied the rear seat.

A face-mask type of goggles, in which the glasses were replaced by light-tight pieces of cardboard and black paint, was used as a very effective blindfold.

The subject was usually directed to take off and fly to some safe altitude at which steady air conditions existed, in the meantime getting accustomed to the

flying qualities of the airplane. At this point the observer took over the controls, and the subject pilot assumed the "blind condition" but putting on the goggles.

The airplane was then brought into position for straightway flight by the observer and turned over to the subject pilot, who then attempted to maintain straight flight.

It was found, without exception, that no subject pilot maintained a straight flight path for any appreciable time, but soon brought the airplane into a properly banked turn, which was maintained for varying periods. This circling flight, after a few turns, frequently assumed a shorter radius with a consequent greater bank, terminating in the nose dropping well down into a diving spiral.

At this point the safety pilot reassumed the control and placed the airplane again in straight flight or in a wide turn to the left or right, and the subject pilot then attempted to attain and maintain straight flight, as previously explained. There appeared little difference in the results, whether they started in straight flight or in a turn.

A continuous record was kept during the intervals of flight made by the subject pilot. By assuming a zero starting point at the beginning of each flight, it was possible to follow the course of the airplane, including at the same time information in regard to the degree of bank, air speed, and any unusual maneuver that the pilot made in his endeavors to maintain a straight course.

In the total number of cases examined, it was found that equally as many turned to the right as to the left, while a very small proportion of the flights showed a heterotropic tendency, that is, to turn in either direction, or to reverse directions in a single flight. Whether the subject pilot was right- or left-handed made little difference in this respect.

Many pilots have felt that the flying sense was largely one of muscular balance and that visual reference played a more or less insignificant part. These experiments should serve to remove this idea, and develop appreciation of the fact that muscular balance plays an extremely small part in flying, excepting in correlation with visual reference in the development of a polished technique.

Visual references of some sort must be provided, either by the horizon, or by the reflection of the sun or moon while in dense fog or clouds, or by proper instrumental equipment.

It will be noted that these experiments in no way parallel any normal condition of flight, since, being blindfolded, the subject pilot had absolutely no opportunity for visual reference of any kind, a condition which seldom could occur in actual practical flight.

The fact should not be neglected that the use of proper navigational instruments provides an artificial horizon, if not in a single instrument, then in the correlation of several instruments, such as a turn and bank indicator and an air-speed meter.—*United States Daily*, September 9, 1929.

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First International Congress on Mental Hygiene will be held at Washington, D. C., May 5 to 10, 1930. Many subjects are listed on the program of the First International Congress on Mental Hygiene, just received from John R. Shillady, administrative secretary, 370 Seventh Avenue, New York City. Practically all aspects of mental hygiene will be covered at the congress. Details of the program have been worked out by a committee of which Dr. Frankwood E. Williams, medical director of the National Committee for Mental Hygiene, is chairman, collaborating with correspondents in many countries. Topics are now ready for publication, and are contained in an informing thirty-three-page *Preliminary Announcement*, obtainable from headquarters office. The congress will be held in Washington, D. C., May 5 to 10, 1930. President Hoover accepted the honorary presidency of this congress, and delegates are expected from more than thirty countries.



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{ GEORGE H. KRESS

{ EMMA W. POPE

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be sent on request.

Responsibility for Statements and Conclusions in Original

Articles.—Authors are responsible for all statements, conclu-

sions and methods of presenting their subjects. These may or

may not be in harmony with the views of the editorial staff.

It is aimed to permit authors to have as wide latitude as the

general policy of the journal and the demands on its space may

permit. The right to reduce or reject any article is always

reserved.

Contributions—Exclusive Publication.—Articles are accepted

for publication on condition that they are contributed solely

to this journal.

Leaflet Regarding Rules of Publication.—California and

Western Medicine has prepared a leaflet explaining its rules

regarding publication. This leaflet gives suggestions on the

preparation of manuscripts and of illustrations. It is suggested

that contributors to this journal write to its office requesting

a copy of this leaflet.

EDITORIALS

THE C. M. A. AND THE YEARS 1929 AND 1930

*Greetings.*—Another calendar year has come to its close, and a new year—1930—has been ushered into existence. CALIFORNIA AND WESTERN MEDICINE again has the privilege of extending the felicitations of the season to its readers, and of expressing the hope that 1930 will be a year of progress for organized medicine in the states of California, Nevada and Utah, and of satisfactory achievement for the members of the medical associations of those commonwealths.

At this time when resolutions for the new year are the order of the day, it may be proper also to dwell for a few moments on some of the aims which were realized in 1929.

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*California Medical Association Incorporation.* The California Medical Association by vote of more than two-thirds of its members has approved the recommendations of the Council and of the House of Delegates that it be incorporated in accordance with the resolutions passed at the last annual session at San Diego. This *fait accompli* should be gratifying to the entire membership of the Association. It is particularly pleasing to the members of the Council, who have given much thought and study to the subject during the last several years and who are convinced

that this incorporation will make for a more substantial association permanency and for greater developmental progress than would otherwise have been possible.

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*Revised Constitution and By-Laws.*—Closely identified with the incorporation of the California Medical Association was the revision of the constitution and by-laws of the Association. A copy of the new rules of procedure has been mailed to all members of the California Medical Association. Any member who has not received a copy is requested to notify the central office at San Francisco.

This revised constitution and by-laws has attracted the attention of the national and of other state associations, and at the annual conference of state society secretaries and editors which was held at the American Medical Association headquarters at Chicago in November last, the editor of this journal was invited to read a paper on the subject. It is our belief that these new rules of procedure will not only work for the advancement of the California Medical Association, but that a considerable number of the provisions will commend themselves to other state medical organizations as being worthy of adoption. The changes which were incorporated are those which past experience suggested. Through these new rules the transaction of association and organization business should be made more easy and more effective.

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*Woman's Auxiliary of the California Medical Association.*—The year 1929 saw the founding of a "Woman's Auxiliary of the California Medical Association." In some other states, such organizations have proved to be of real value. Scientific medicine needs the coöperative aid which can come through such auxiliaries. Whatever makes for better understanding among physicians and their families makes for better organization. Nowadays women's clubs exercise a strong influence on civic affairs. The families of physicians have a natural interest in public health problems. A state Woman's Auxiliary of the California Medical Association, composed of component county woman's auxiliaries, can become a real factor in promoting public health work. The basic rules which were laid down for this new organization in relation to the state and component county medical societies, should make it possible for work to be carried on, not only without friction, but to the great advantage of the aims of organized medicine.

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*The Coffey Plan.*—For want of a better name, the studies which for some time have been carried on by the Council and certain standing committees of the California Medical Association, and bearing on the evolvement of a plan which aims to bring efficient medical and surgical service to that large group of citizens who are in what might be called certain portions or strata of the great middle class of our population, while at the same time safeguarding the standards and interests of



scientific and organized medicine and of individual practice as it exists today, are referred to as the "Coffey Plan." As has been previously stated in this column, Dr. Walter B. Coffey of San Francisco submitted a plan designed to accomplish ends such as the above, as a working basis for further studies. He is not committed to his tentative outline nor are the members of the Council committed to it. But it serves as a good starting basis for further study and investigation.

The problem is a most difficult one, and if California can solve it in good part, and in such manner as to accomplish the ends noted in the previous paragraph, it will be very much to the credit of the California Medical Association. The members of the Council are colleagues who have had long experience in private and institutional and organization medical practice, they are men who are practical and of good judgment of values, and their studies should make for progress in the solution of some of these very vexing problems which have been thrust before us, through the great changes which in recent years so unexpectedly have taken place on so broad a scale in the ways and standards of living of very many of our lay fellow citizens.

\* \* \*

*Possible Revision of Medical Practice Act.*—A large special committee, with a San Francisco group, a Southern California group, and an At-large group, has been appointed to make a special study of the Medical Practice Act of California. If the studies of this committee lead to nothing more than endorsement and codification of the present provisions of the Medical Practice Act, that in itself would be worth the while. The studies, however, should lead to more than that. These medical practice laws are the legal standards which are laid down for the guidance of medical men and women. Such statutes should conform to the highest standards of scientific medicine, and should make for the best possible protection of the public health, as well as of the interests of the medical profession. The members of that profession, through many years of service in county and other public hospitals, have placed the citizens of California under heavy obligation for the gratuitous work so altruistically given. Because of the generous service which was and is so gladly and efficiently given, the medical profession is especially worthy of consideration when its members put forth legislative suggestions designed to better protect the health of the people and to promote the material and cultural interests of our commonwealth. In making these statements we are not boasting. We are simply calling attention to a record of service which, because of a foolish modesty or oversensitiveness on the part of the medical profession, has permitted the lay public to accept the same as a matter of course and often without any sense of appreciation.

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*Possible Basic Science Law for California.*—The last several decades have witnessed, especially in California, the legal recognition of such

a considerable number of cultist practitioner groups that some members of the profession have acquired the habit of thinking that all remedial legislation to curb such deplorable introduction of low educational and professional standards, as it is usually found to exist in new cultist groups, is quite hopeless. Such attitude of resignation to an evil is neither necessary nor proper. It is quite possible that in the past our profession has approached the solution of certain of these cultist medicine problems by the wrong routes. There is a safe groundwork upon which can be built legitimate opposition to cultist or low standard healing art practice. That groundwork rests upon the axiomatic principle that all intelligent citizens concede and agree that a certain amount of preliminary education, as well as professional training, should be possessed by every practitioner of the healing art who seeks a legal sanction to practice and to have under his custodianship, the health and lives of lay fellow citizens who come to him in good faith.

A high school education is conceded by all persons to be a very legitimate preliminary minimum, as regards education, which should be necessary to professional training proper. The value of a high school preliminary education is this, that it will increase the difficulty for cultist promoters of the future, through inability to obtain a sufficiently large number of disciples having a full high school education, to profitably launch their cultist movements. With only a small group of adherents in their first student bodies, it should be possible in the future to keep such as yet unborn cultist and low standard educational groups from receiving legal recognition. A proper basic science law will make it easier to accomplish this beneficent result for the citizens of California. Therefore the special committee referred to in the comments on the California Medical Practice Act will also study basic science laws.

\* \* \*

*Standing Committees of the California Medical Association.*—Chapter V of the new by-laws deals with standing committees. A directory of standing committees is printed in every issue of CALIFORNIA AND WESTERN MEDICINE (see front cover index under Miscellany). The attention of members of such committees is called to this Chapter V of the by-laws, in which is outlined the organization work to be covered by each committee. All standing committees should be active agents in promoting the welfare of the California Medical Association. Section 21 of Chapter V specifies that a written report must be submitted annually by every standing committee so that the same may be printed in the "Preconvention Bulletin" for the information of members of the House of Delegates. Members of standing committees are therefore requested to read Chapter V and to get their work under way so that reports may be ready for the Del Monte session of the House of Delegates. The central office of the



Association in such work is at the service of all committees, and invites correspondence and offers its full coöperation.

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*Last, But Not Least, the Year 1930 Is a State Election Year.*—This caption is presented to remind us of our individual civic obligations to be interested in the complexion of the next state legislature, many of whose assembly and senate members will be elected in the fall of 1930. These particular lay fellow citizens who will have legislative powers should be contacted at an early day and an intelligent effort made to acquaint them with the viewpoints of physicians as regards maintenance of proper standards in medical licensure and in public health activities. It is not fair to criticize members of the assembly and senate when they vote in opposition to the maintenance of such standards if we have made no previous attempts to acquaint them with medical problems which may come before them, and to inform them why we hold certain opinions thereon. The medical profession does sufficient service in the protection of the public health of California to merit careful consideration of its viewpoints. Legislators will be found to be glad to give such consideration if proper contacts are made from the beginning. Every member who knows a state assemblyman or state senator or a prospective state assemblyman or senator may well cultivate such acquaintanceship or friendship, for it later on might be of real value in the protection of public health interests. In responsibilities such as this every member of the California Medical Association can be of service. The officers of the Association can only act for and speak on behalf of their fellow members.

#### NEW COUNTY SOCIETY OFFICERS—SOME OF THEIR PROBLEMS

*The New Year Brings New County Officers.*—Once again, at the beginning of this new year, most of the component county societies of the California Medical Association will find themselves taking up their meeting and other work under new groups of officers. Some of these officers will have gone through the apprenticeship of other society positions of responsibility, and especially if they have functioned as secretaries of their societies they will be able to have a somewhat intimate knowledge and judgment of county society work and needs. It is well, however, no matter how great our past experience may have been, at the beginning of work that will cover the program of a calendar year, to make somewhat of a survey of the objects which a county society should seek to accomplish. On that account some of these aims, which in times past have been discussed in detail, will be here commented upon.

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*Intensive and Extensive Functions of a County Unit.*—The development of a county medical society may be said to fall under two major heads.

The one set of major activities are of an internal or intensive nature and have to do with

all those efforts which would bring to the members of the county society the most profitable association possible; while promoting the unity and good understanding of the members and so making for a component county society that will find its proper local place in the scheme of state and national expressions of organized medicine.

The other set of major responsibilities has to do with the outward or external work or extensive activities of a county unit. Here come up membership problems of nonaffiliated physicians, and contacts wherein the county society as an organization and through its members as individuals makes its influence felt in civic affairs and in lay and affiliated organizations.

That county unit will have the best record for progress whose officers visualize its problems in these two fields and who use intelligent and practical efforts to solve the same. The responsibility for successful or unsuccessful performance of a county society's activities for the year 1930 must necessarily rest upon the officers who by their fellows have been selected for positions of honor, because of the belief of their fellow members that as officers they would generously give of themselves in service to organized medicine.

\* \* \*

*Medical Meetings Should Have a Twofold Nature, Scientific and Good Fellowship.*—Medicine is a growing science. Its members seek the inspiration and stimulation which comes from consideration and discussion of the experiences and problems presented by colleagues. Therein lies the basis of the scientific programs of medical meetings.

Essayists should be of two classes: One, local members who present studies and problems concerned with local practice and with whom exchange of opinion, from the standpoint of local environment, makes for more efficient methods in practice; two, invited guest speakers. In California the component county societies, through the extension lecture department of the California Medical Association (see page 294 of the October 1929 issue), have an opportunity to bring to local society meetings colleagues from other cities who are prepared to present papers on a large number of scientific topics. County societies owe it to their own members from time to time to invite one or more of such guest speakers to their meetings. A perusal of the proceedings of some of the county units shows that they are alert to the advantages to be derived from such outside speakers. The program committees of every county society should hold a meeting at an early date and outline in fairly definite form the work to be covered in the scientific meetings, and what local and guest speakers are to be invited. A program committee which permits the scientific proceedings to rest on what may be called haphazard voluntary presentation of papers is not often in position to congratulate itself on having made a real effort properly to do its work.

Program committees should also appreciate that the development of good fellowship and of fine and generous understanding between mem-



bers of a county medical society may be quite as important as the scientific problems. Informal buffet lunches and suppers are big aids in this, as is attested by the goodly number of county societies which report such activities. A county medical society whose members are broken up into groups, with only casual acquaintanceship or friendship relations between members, cannot really be stated to be a well organized county unit, no matter how large its numerical membership may be. The medical profession, in greater degree than ever before, today needs good fellowship among its members because, without such understanding, the medical profession will not be in position to solve to best advantage the economic and social problems connected with medical practice. Let us know one another and understand one another. Such understanding will make for our individual and our collective development.

\* \* \*

*A Special Topic for Study in 1930.*—Reference has been made in this column to certain studies being carried on by state society officers in relation to evils that would threaten medical practice in case state medicine ever acquired a foothold. These topics of the so-called "high cost of medical care" (an unfortunate misnomer), and of so-called "state medicine," are worthy of a place on the program of every county society in California if for no other reason than to show how large and many are the problems connected therewith, and how very difficult is their solution. If the members of each county society will study these questions, then a foundation will have been laid for a better evaluation of any plan that might later on be presented by the parent or state association.

All physicians must earn money in order to live. These topics have much to do with these money or economic phases of professional practice. It is worse than silly to imply that they should not have a place or serious consideration in our meetings. Some of our present-day problems have arisen in good part because of our accentuation and overemphasis of scientific papers, with almost total neglect of papers or discussions having to do with the economic problems of medical practice. As a group we may be peculiar in that we may not strive for much monetary enrichment or material ease or luxury, but that is no reason for pretending that economic problems must not be mentioned or discussed in our meetings.

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*Woman's Auxiliaries in County Societies.*—In the Miscellany department of this issue of CALIFORNIA AND WESTERN MEDICINE is printed an outline of work for woman's auxiliaries. In this column, in the November 1929 issue, page 351, were printed some comments on how to organize county woman's auxiliaries. Prior to the next annual session at Del Monte on April 28, every component county society should aim to bring a woman's auxiliary into existence. The advantages of such auxiliaries have been outlined elsewhere. The California Medical Association has com-

mitted itself to the sponsorship of such organizations. Each county society should do its part by bringing such a local auxiliary into being. The state auxiliary will then be able to take up its further work in earnest when the annual session convenes at Del Monte. Here again the credit or discredit of forming or not forming such county auxiliaries must rest largely on the shoulders of the officers of our county medical societies.

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*Revision of County Society By-Laws.*—A considerable number of county societies have rather loose rules of procedure. They learn this to their sorrow when certain difficulties arise. Every county society must conform to and adopt those portions of the constitution and by-laws of the California Medical Association which apply to component county societies. Every member of every county society in the California Medical Association has recently received a copy of the state society constitution and by-laws. Here again we have a convenient working basis or starting point in a consideration of a possible revision of county society constitutions and by-laws.

It would be a distinct advantage to medical organization in California if the constitutions and by-laws of all county societies were modeled in good part after this California Medical Association general pattern. Would it not be a wise procedure if every county society in the near future appointed a committee to bring in a report on a possible revision of its constitution and by-laws, with instructions to use the California Medical Association draft as a basis for incorporation of such local modifications as local needs or customs might make desirable? It should not be difficult to make such transpositions. Each county society thus would be working in closer harmony and coöperation with other county societies as well as with the parent state organization. A better opportunity for such a study could not be asked for, because all members have a copy of the printed state constitution and by-laws as a basis for comparison. This will be a good year in which to make such a study.

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*Membership Growth.*—Every member receives each year two directories of California physicians. One of these directories is issued by the California Medical Association and the other by the Board of Medical Examiners of the State of California. The general county arrangement of names follows the same general form in the two publications. It is therefore easy to scan the lists in the different counties and to note who are the nonmembers.

Other things being equal, mere graduation from certain high-grade schools of medicine should imply that each such graduate should be affiliated with organized medicine. If such is not the case, the reasons for such nonaffiliation should be known to the society officers.

With so easy and simple a method of reference, why should not every county society instruct a standing or special committee on membership to bring in to it or its council a report



on presumably eligible physicians who are non-members? Why must this type of work be left to happy-go-lucky chance? We are organized in medicine to promote scientific standards and to promote the interests of the public health and the welfare of our members. Let us use that same common-sense acumen and judgment in these matters which we see everywhere manifested by business and other organizations which are successful. The practice of medicine is very individualistic, it is true, but in our group organization and group efforts we should use those methods which are recognized as efficient parts and parcels of group activities. Bringing all eligible nonmembers into active membership affiliation with us is one of the very special of such group activities. If we give this work its proper recognition our county units and our state association both will profit and be the stronger. Such a study should be promoted by all county society officers who wish to see their societies go on to fullest possible development.

#### INDIVIDUALISM AND THE GROUP SPIRIT IN THE PRACTICE OF MEDICINE

*Individualism in Medicine.*—The December issue of CALIFORNIA AND WESTERN MEDICINE presented as its opening article a paper on "Individualism in Medicine," from the pen of this year's retiring president of the American Medical Association, Dr. W. S. Thayer of Johns Hopkins University. The paper was of such exceptional worth that the wish comes that every member of the California, Nevada and Utah Medical Associations would take the time to read it. Its clarity and charm in describing some modern-day tendencies in medical practice will amply reward all who give it their perusal and consideration.

In none of the learned professions are men called upon to play such lone hands, as it were, and to lead such individualistic professional lives as in the practice of medicine. As a matter of fact, it is almost impossible to conceive of successful practice without such individualism. This personal contact with a patient and the responsibility for one's patient is a something which, as Dr. Thayer well states, cannot be passed to another. It is also equally true, as he points out, that "coöperation in the mere sense of division of responsibility is not coöperation."

It is good for us to keep in mind these fundamental principles which have to do with the art and science of medical practice, for in so doing we may be saved the embarrassment of finding ourselves worshipping at the altars of what seem today to be scientific facts, but which in the light of the tomorrow may have far less real value than their supposed worth of the present would indicate.

In our quest for greater attainment in the scientific phases of medical practice, it is also wise not to belittle those important procedures which have to do with what is the art of medicine, lest in so doing we create limitations of outlook that may keep us from measuring up to that full effi-

ciency which is characteristic of the highest type of physicians. And above all else, let us guard ourselves well, so that we join not that fortunately somewhat limited group in our own profession who might be called the intellectual snobs, and who in our profession, as in other callings where such self-sufficient individuals are found, magnify the little extra book or other knowledge or skill or success which they may have acquired until it becomes a detriment to themselves and to their capacity for larger service, as well as a reflection on that large group of physicians who seek increased knowledge and efficiency for the heart and mind satisfaction of being able to be more useful to their patients, while at the same time endeavoring to maintain that humility of demeanor which has always been associated with real greatness, wherever found.

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*The Group Spirit in Medicine.*—Medicine needs the stimulus of group association as well as that which is a part of individualism. The group spirit in medicine may be said to have two major expressions.

One of these major phases of group spirit was indicated when Dr. Thayer called attention to the need of group association and coöperation in the care of individual patients. That expression of group spirit is one of which every physician must avail himself, unless he be absolutely isolated and far away from his fellows. Even then such an isolated colleague can maintain coöperative effort through his journals, with his fellows who are more fortunately situated, by learning from their writings concerning the newer methods of procedure that would be to the advantage of his patients.

As an expression of the second major phase of group spirit, this journal, and the state medical associations which sponsor it, can be taken as examples. Another name for this particular phase of group spirit is "organized medicine." Every activity carried on by organized medicine, that is, all efforts put forth by groups of physicians who form various medical societies, are efforts which are an expression of this type of group spirit. To partake of the same, one must enter into the work with unselfish, impersonal motives, and with the determination to work and serve in the activities which are put forth by such societies, when they endeavor in the advances made by civilization, to place the standards and practice of medicine on the highest possible plane of service.

In such an organization plan the splendid scheme propounded and put into being years ago, whereby in every county of these United States one medical organization, and only one, was to be officially recognized, these to make up the state organizations, and those in turn to compose the national or American Medical Association, has been the means of explaining much of the remark-

able progress which is to the credit of American medicine during the last three decades.

But creditable as that record of achievement in organization may be, it is far, far from what it could or should be. All about us, on every hand, are organizations, seemingly without end, which seem to have a more substantial substratum in material resources than that possessed by organized medicine. Yet none of these organizations have so large a proportion of members who do so much service for unfortunate fellow citizens, often without monetary or other reward, as that of the profession of medicine. It is conceded by all honest thinking members of the laity who have studied these matters that the medical profession is entitled to more recognition for its altruistic principles and work than it actually receives. Yet the fact remains that the ancient profession of the healing art could learn much concerning effective organization from a host of groups and societies that seem to have been born but yesterday.

Wherein then, do we fail? Is it because we do not sufficiently dissociate ourselves from our daily individualistic lives? Do we not, through such non-association, prevent the realization of achievement results which would be ours were we only to contact with one another and work shoulder to shoulder with one another, as could rightly be expected of colleagues in a noble profession to which each has pledged his faith and homage?

It has been the fashion of some members of our profession to decry medical organizations and medical society work. Yet these same colleagues are often usually more than willing to accept any and all official honors which such medical organizations can bestow upon them. Sometimes one is almost tempted to think that some of these non-coöperative, non-group spirit colleagues, who give practically nothing to the medical organizations which protect the interests of all of us, indulge in their criticisms, largely because in their selfishness, they have inwardly taken umbrage at such official nonrecognition, or because they look with envious eyes on official recognition of colleagues to whom such honors have come as a reward for altruistic service. To cover up their personal non-coöperation, they pose as being above medical societies and indifferent to the work of such organizations. Such colleagues should remember that even though they themselves are unwilling to coöperate in group efforts, it is not necessary to belittle or tear down the work of other more generous colleagues.

In conclusion let us repeat that individualism in medicine will always be with us because the nature of our professional work constantly accentuates individualistic spirit. On the other hand, the group spirit seems to assert itself with us, only in spasmodic form. In some colleagues it is strong, in others it seems altogether absent. We belong to those who hold that the group spirit in medical practice should be nurtured and developed. It is the happy combination of individual

and group effort that will give American medicine the opportunity to make its greatest strides in the future.

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#### MARY BAKER EDDY—A LETTER AND A BOOK REVIEW

*Policy of This Journal on Religious and Public Health Matters.*—It is the policy of this journal not to discuss religious matters in its pages. This policy, however, does not preclude the mention or presentation of information having to do with general principles related to public health responsibilities, or with basic principles in news or educational procedures when such principles become involved in the acts of either healing or non-healing religious groups.

That is why in this issue is here printed so unusual a caption reference as that which heads these comments. The object thereof is to call attention to an open letter which is printed in the Correspondence column of the Miscellany Department of this number, and to a review which appears in the Book Review column.

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*Astounding Statements in the Letter.*—The letter referred to gives the experiences of a member of the California Medical Association in trying to purchase a copy of the biography entitled "Mrs. Eddy—The Biography of a Virginal Mind" by Dakin, in the different book stores and department store book departments of Los Angeles. The perusal of the letter will give a shock when it is learned that a book brought off the press by a reputable publishing house and having the sanction of the United States Government to go through the mails seemingly should be practically barred from the sales counters of such stores. Certainly if such book and department stores do so un-American a thing out of slavish or other fear of one group of citizens who may be averse to having the biographical volume read by other Americans, then it is proper that such stores should appreciate that such actions on their parts will be given publicity. Such publicity among the two camps of for and against citizens will permit such stores to receive what they presumably seek, namely, to benefit from the business accruing to them from the larger purchases made by whichever group of citizens is seemingly favored through such partisan espousal of interests.

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*Principles Involved Are Important.*—Because a knowledge of biographical data is more or less essential to an understanding of the physical, psychological and supposedly spiritual doctrines propounded by the founder of a spiritual healing sect, which in its work or mission contacts somewhat intimately with public health work and procedures, members of the medical profession have a very natural interest in such a biography. Because of the free speech and free-press principles which are involved, references to the letter and book review are accordingly here made so that all readers who so desire may acquaint themselves more fully concerning the issues and facts involved.



# MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

## Ophthalmology

**Chronic Dacryocystitis.**—Cordes and Martin have called attention to the subject of chronic dacryocystitis by reporting the cure of epiphora and suppuration in over 90 per cent of selected cases by doing the Mosher-Toti operation. This procedure, as well as the Dupuy-Dutemps operation, makes an opening from the tear sac into the nose by using a skin incision and intranasal manipulation. The West procedure is done by intranasal manipulation only. From a review of the literature one finds that the percentage of cures reported by any one of these methods in competent hands averages well over 85 per cent. Cases must be selected where the obstruction is in the lacrimal duct and where the canaliculi are intact. In the face of statistics such as these we must recognize that extirpation of the lacrimal sac for the treatment of chronic dacryocystitis should no longer be the procedure of last resort. We know that one always has more or less troublesome epiphora after extirpation of the sac, so that when there is an 85 per cent possibility of reestablishing drainage the patient is entitled to the benefit of one of these procedures before advising removal of the sac.

M. F. WEYMANN,  
Los Angeles.

## Medicine

### INTRODUCTION

**The Present Status of Liver Function Tests.\***  
The time for evaluation of the various liver function tests has come. Thirty years ago Strauss introduced the first liver function test and the last twenty years have seen intensive work on this subject, particularly in the United States. This feeling that we can take stock in what has been accomplished is widespread, as can be seen from the recent publication of large series of from 300 to 1200 cases in which comparisons between the various liver function tests are drawn. Moreover, judging by the remarkable similarity of opinions of various workers on the relative merits of these tests, such a feeling is entirely justified.

The brief summary presented here is based on a survey of the recent literature in addition to the experience in this field of the University of California Department of Medicine which comprises a series of nearly six hundred cases in which the Rose Bengal liver function test, developed by

Delprat, Kerr, and Epstein, was done and smaller series of most of the tests which will be discussed.

There are two great classes into which all tests of liver function can be divided, the metabolic and the excretion tests.

### PART I

Among the functions of the liver, those pertaining to carbohydrate metabolism are of great importance, and here we have the well-known levulose- and galactose-tolerance tests. The objections to these sugar-tolerance tests as an indication of liver function are twofold. The first and very real objection is that while sugar metabolism suffers in diseases of the liver, beyond reasonable doubt, with the present technique, this is susceptible of consistent demonstration only by group averages. In the individual cases, even of proved liver disease, the results of these tests are so often within the upper limits of normal as to rob them of any great significance. The second objection is that other organs, such as the pancreas, the pituitary, and the muscles, also play a prominent rôle in carbohydrate metabolism and, therefore, any discovered abnormalities of it may not be due specifically to liver deficiency. The first difficulty may in time be overcome by improved technique of the tests. The second objection in theory we never will be able to disregard totally. However, the probability is that, in practice, with a suitable sugar-tolerance test at hand, it will present no greater difficulties to the diagnosis of liver disease than the fact that sugar utilization is not solely dependent on the pancreas interferes with our diagnosis of diabetes.

Another set of functions of the liver, of prime importance, deals with the metabolism of nitrogen compounds, and many phases of it were selected at one time or another as reflecting in a qualitative or quantitative way the functional activity of the liver.

Here can be mentioned studies of urea, uric acid, total nonprotein nitrogen and amino-acid fractions of the blood and that of ammonia, undetermined nitrogen, amino-acids, urea and uric acid in the urine, as well as the quantitative interrelations of these substances.

Unfortunately, even the best of these tests up to the present were open to the same two objections as the sugar-tolerance tests, namely, consistency of results only in the case of disease groups, but not individuals and the possible influence of changes in other organs on the outcome of any given test. However, the appearance of the amino-acids, leucin and tyrosin in the urine

\* From the Department of Medicine, University of California Medical School, San Francisco.

\* Read before the General Meeting of the San Francisco County Medical Society, April 9, 1929.

can be accepted as evidence of rapid liver tissue disintegration.

Some very hopeful work on the urea formation function of the liver is in progress at the Mount Sinai Hospital in New York, but there is need of more work before final judgment can be passed on this test.

Only recently attempts were begun to determine the detoxicating power of the liver, and Vesell and Sherwin have obtained promising results with acetylation of para-aminobenzoic acid by the liver.

The obvious conclusion from the foregoing is that at present metabolic function tests of the liver cannot be recommended for practical use.

T. L. ALTHAUSEN, San Francisco.

(Part II will be printed in next issue.)

### Ear, Nose and Throat

**Recognition of Infected Tonsils.**—While the theory of focal infection is based on scientific foundation, the practical application of this theory is in many instances not so scientifically worked out.

Recognition of infection in tonsils well illustrates this point. In the majority of cases only the size of the tonsil is considered, whereas their size, color, presence of pus or caseous debris in the crypts, and bacterial flora by culture, should be examined and secondary manifestations of infection be taken in consideration.

History of frequent colds and sore throats, complaint of lack of pep, fatigue and lowered resistance to infection supply signs of a toxic condition which may be the result of an infection in the tonsils.

It is a customary routine to notice first of all the size of the tonsils. In the textbooks, the statement is usually made that the size of the tonsils is normal if they do not project from the pillars, otherwise they are hypertrophied. In the light of modern knowledge, this definition should be revised. In children very large hyperplastic tonsils can often be seen as a manifestation of status lymphaticus. The pathologic significance of this type is rather negative, the enlargement causing only a mechanical obstruction. On the other hand, the observations of many authors definitely establish the fact that even very small remnants of not completely removed tonsils, if infected, may be the cause of very serious complications.

Therefore, not the size of the tonsils, but the presence of infection in them should be first established. The anterior pillar should be retracted and gentle pressure be exerted upon the tonsil and, in a surprisingly large number of cases, a drop of liquid pus or of caseous matter will be pressed out from some of the crypts, even when the tonsil at sight appeared more or less innocent.

The color of the tonsil and of the surrounding parts supply a great deal of information. While

in normal condition, its color does not differ from the surrounding mucous membranes; when inflamed, various shades of red discoloration are present. In adults, infected tonsils of fibrous type, or submerged tonsils, are usually pale, whereas, the inlets of the crypts are inflamed and a characteristic red border is present along the anterior pillars, indicating a deeply seated infection. The extension of the infection from the tonsil to the lymphatic tissue on the lateral walls of the pharynx and into the hypo-pharynx, should be considered. Systemic manifestations as rheumatism, neuralgias, myocardial involvement and so on, are signs of secondary foci of infection.

A complete study of the tonsil should include a bacteriologic examination of the flora of the pus expressed. Besides different groups of staphylo or streptococci sometimes tubercle bacilli or Vincent's bacilli can be found. In single instances syphilitic lesions on the tonsils will be established.

BENJAMIN KATZ, Los Angeles.

### Medicine

**The Stramonium Treatment of Chronic Encephalitis.**—Acute encephalitis occurs most commonly in the form of postinfluenzal epidemics, but may occur sporadically. Formerly it was called encephalitis lethargica, but as the tendency to sleep has become uncommon in recent years the term of epidemic encephalitis is now usually applied. In a large number of cases it lapses into the chronic form, or the chronic stage becomes manifest up to one or even two years following the acute illness, the interval period often being one of good health. Not infrequently no antecedent acute stage can be identified.

The most constant clinical feature of chronic encephalitis is the Parkinsonian syndrome. The flexion attitude, the mask-like face, the muscular rigidity and the propulsion gait, together with tremor, make up this syndrome, but the last symptom, so constant in idiopathic parkinsonism of old people, is often lacking. There are many complications dependent on the extrapyramidal tract system, some of which may well be considered part of the disease. Common ones are bradykinesia, blepharospasm, oculogyric crises, drooling, slow speech, trismus, hyperhydrosis, dysphagia, myalgias, hyperpnea, myoclonic spasms, paresis, and catatonia. Mental changes may be striking, but retardation is frequently inconspicuous. In children there may be a complete alteration in character, the so-called apachism. Adults are subject to emotional outbursts often considered hysterical, and in the worst cases their response is so poor that it is difficult to estimate the condition of their intellect.

The onset of the symptoms of the chronic stage is insidious. The condition is usually diagnosed as "neurosis" or "hysteria." It may be months, or even years, before typical parkinsonism develops together with some or many of the other late symptoms. After a variable period of time the disease in many patients apparently becomes



arrested. A few remain active and able to carry on some sort of suitable work, many are semi-invalids requiring considerable attention but still able to get about, but the majority are bedridden invalids. Doctor Crossman of Washington, D. C., recently stated that 217 of 273 hospitalized chronic encephalitis patients were totally disabled.

Institutions care for many of these patients and they are a great problem. When we realize that a large number have to be bathed, clothed, fed, and waited upon for every want and need, often while in full possession of their mental faculties, it is evident that any therapy which will in any way improve their condition will be of great value.

Four and one-half years ago Juster reported encouraging improvement in a case treated with large doses of *Datura stramonium*. A year later observations on twenty-four cases similarly treated were briefly reported upon from Paris, also with good results. Only three articles have appeared in English to date. Two noted that almost all symptoms improve under Juster's method of treatment and that all cases improve except the aged ones. Jacobson and Epplen presented at the last American Medical Association meeting in Portland a review of twenty-six cases including some with true Parkinson's disease. They used the tincture of stramonium, and concluded that all patients were benefited, some remarkably so. These reports together with a brief one on four cases from the Veterans' Bureau represent all the available information on the subject. Articles are still appearing in the medical journals discussing the treatment of chronic encephalitis which do not even mention Juster's method of therapy.

The essence of this method of treatment is to use large doses of stramonium. A daily total dose of 6 to 12 cubic centimeters of the tincture or 1 to 2 grams of the dried leaves is the most effective. Equal doses of the tincture are given three times a day, beginning at 1 cubic centimeter t. i. d. and working up to 3 or 4 cubic centimeters t. i. d. within three days. Improvement is usually noted within forty-eight hours. The treatment must continue indefinitely, as the patients relapse within a few days if it is stopped. Signs of intolerance or overdosage by this method are not frequent. They are: difficulty of vision, dryness of the mouth, nausea, a sense of constriction in the chest, and diarrhea. All of these clear up in two or three days on suspending treatment, and do not tend to recur on using smaller doses. As to prognosis it is impossible to judge which patients will receive the greatest benefit, as frequently bad cases of long standing are helped the most.

The improvement is striking in many cases, particularly in the patients' mental attitude. They nearly all "feel better." Their activity and their powers of enjoyment may be greatly increased. Some bedridden invalids are actually able to be up and about, and others less afflicted are able to resume light work. Many are at their best if they take hyoscin in addition to stramonium, and

this should not be lost sight of. All patients are not benefited, but certainly for the great majority Juster's method of stramonium treatment stands out as one of the really great advances in modern therapeutics, particularly as chronic encephalitis has previously always been a discouraging condition for any form of therapy.

GARNETT CHENEY, San Francisco.

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Substandard Ether Is Seized by Government.—The largest shipment of ether for anesthesia ever detained by the Federal Government was seized at Bayway, New Jersey, recently after laboratory tests had shown that samples from a lot consisting of 108,300 quarter-pound tins were below the standards required under the Federal Food and Drugs Act. The seizure was made by the Food, Drug, and Insecticide Administration, United States Department of Agriculture, which enforces the Food and Drugs Act. This ether did not meet the requirements of the United States Pharmacopeia, which is the standard designated by the Food and Drugs Act for drugs in interstate commerce or imported from abroad.

The seized ether is part of a lot made during the World War for the Government. It was in storage until 1926, by which time it had deteriorated to such degree as to be unfit for use as an anesthetic. The War Department then sold it at a low price under bond that it was not to be used or resold for use as an anesthetic but only for technical purposes, such as in laboratories, for dry cleaning, or for fuel in starting motors. Contrary to the terms of the bond, some of this ether, labeled as anesthetic ether, was consigned to hospitals in small lots. These small lots were seized at once. Now this large shipment has been removed from the channels of trade by action under the Food and Drugs Act.

Although improvement has been made in the manufacture and packaging of ether in the last few years, some ether still shows deterioration upon standing in sealed tins. For this reason authorities have been especially vigilant in the inspection of ether.

Whether or not ether that has deteriorated is harmful to patients on the operating table, a matter upon which medical authorities do not entirely agree, is quite beside the point in the administration of the Food and Drugs Act. It is the duty of the officials enforcing this law to remove from interstate commerce all ether that fails to meet the standards set by the United States Pharmacopeia.—*United States Department of Agriculture, Office of Information, Press Service.*

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Progress and Poverty.—Peculiar as it may seem, along with great wealth we have associated great poverty. Henry George, fifty years ago, coined the expression "Progress and Poverty" as the title to his memorable book which has had a tremendous sale since its publication. Henry George's contention is truer today than it was half a century ago when the greater part of the population was rural and in closer contact with the source of maintenance. It is said that at present those with incomes of \$10,000 and upward number only two-thirds per cent of the whole population; only six per cent have incomes of \$3000 and 14 per cent are in the \$2000 class. This means that 86 per cent of the people have incomes less than \$2000 a year. Through high-pressure salesmanship and the moving-picture theaters and other ways of absorbing incomes many of these small incomes are spent before they are earned, leaving no provision for emergencies to which category illness belongs. So while the medical profession has nothing to say in regard to the distribution of moneys appropriated, we cannot but be greatly interested in charity as a social problem. Broadly speaking, while charity may evoke generous responses on the part of the giver the increasing necessity for it indicates something wrong with our social and industrial life.—*The Journal of the Michigan State Medical Society, December 1929.*

# STATE MEDICAL ASSOCIATIONS

## CALIFORNIA MEDICAL ASSOCIATION

MORTON R. GIBBONS.....President  
LYELL C. KINNEY.....President-Elect  
EMMA W. POPE.....Secretary

### OFFICIAL NOTICES

**Council Meeting.**—The next meeting of the Council will be held at the office of the Association, Room 2004, 450 Sutter Street, San Francisco, January 18, 1930, at 10 a. m.

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**Apportioned Delegates and Alternates to Annual Meeting, 1930. Membership as of November 1, 1929.\***

County	Members Nov. 1, 1929	Delegates to 1930 Session
Alameda .....	404	9
Butte .....	18	1
Contra Costa .....	37	1
Fresno .....	103	3
Glenn .....	7	1
Humboldt .....	36	1
Imperial .....	22	1
Kern .....	48	1
Lassen-Plumas .....	14	1
Los Angeles .....	1760	36
Marin .....	19	1
Mendocino .....	15	1
Merced .....	20	1
Monterey .....	28	1
Napa .....	25	1
Orange .....	86	2
Placer .....	26	1
Riverside .....	48	1
Sacramento .....	125	3
San Benito .....	7	1
San Bernardino .....	106	3
San Diego .....	217	5
San Francisco .....	931	19
San Joaquin .....	83	2
San Luis Obispo .....	15	1
San Mateo .....	29	1
Santa Barbara .....	74	2
Santa Clara .....	142	3
Santa Cruz .....	30	1
Shasta .....	9	1
Siskiyou .....	15	1
Solano .....	17	1
Sonoma .....	45	1
Stanislaus .....	39	1
Tehama .....	11	1
Tulare .....	36	1
Tuolumne .....	6	1
Ventura .....	29	1
Yolo-Colusa .....	25	1
Yuba-Sutter .....	13	1
Total.....	4720	116

\*Constitution and By-Laws of the California Medical Association as amended and adopted May 8, 1929. Article V, Section 2.—Basis of Representation of Component County Societies. Each component county society shall be entitled to be represented by one delegate and one corresponding alternate for every fifty active members thereof, and also by one delegate and one corresponding alternate for each fraction of fifty active members in excess of fifty or multiple thereof as of the first day of November of the year preceding a current annual session. Every component county society having less than fifty active members shall be entitled to be represented by one delegate and one corresponding alternate.

**Special Committee on California Medical Practice Act.**—At the last meeting of the Council a special committee on revision of the California Medical Practice Act and a possible basic science law was authorized and appointed. Members of the California Medical Association are invited to send suggestions to the general chairman or the subcommittee chairmen. The committee is made up of representatives of the Council, of the Board of Medical Examiners, and of the medical colleges of California, and is composed as follows:

Bay region group: Morton R. Gibbons, San Francisco, group chairman; Emma W. Pope, T. Henshaw Kelly, Walter B. Coffey, Joseph Catton, Langley Porter, William Ophüls, Hartley Peart, San Francisco; Oliver D. Hamlin, Oakland.

Los Angeles group: George H. Kress, Los Angeles, general chairman; Percy T. Magan, Los Angeles, group chairman; William Duffield, William Cutter, William Molony, Los Angeles; Lyell C. Kinney, San Diego.

At large group: Junius Harris, Sacramento, group chairman; Percy Phillips, Santa Cruz; Charles Pinkham, San Francisco; Frederick Gundrum, Sacramento.

### COMPONENT COUNTY SOCIETIES

#### ALAMEDA COUNTY

The annual meeting of the Alameda County Medical Association was held at the Ethel Moore Memorial Building on Monday, November 18, at 8:15 p. m.

The scientific program of the evening was presented by the staff of Peralta Hospital, the first paper being a report of an interesting case of fibrosarcoma of the lung by Dr. R. T. Legge. Doctor Legge reported a patient who came to him with a history of an acute pneumonia followed by empyema and drainage. The pneumonic process was typical in every way, and the chest had been drained of a purulent fluid over a considerable period. The first examination showed much fluid in the left chest with atelectasis of the left lung and a heart which was pushed definitely to the right. X-ray of the right chest showed a large mass diagnosed clinically as a malignant tumor of the lung. The tumor at autopsy proved to be a fibrosarcoma. An interesting point about this case was the fact, as pointed out by Doctor Legge, that a definite tumor mass had been discovered in this patient's chest two and one-half years before his death. At this time the mass was diagnosed as benign, probably a dermoid cyst. Doctor Legge's paper was discussed by Dr. C. L. McVey, who brought out the fact that there is a definite increase in malignant tumors of all types and in all locations, but that there is a particular increase in cancers of the lung. Doctor McVey further discussed the differential diagnosis of this lesion particularly in connection with the x-ray. Doctor Scudder reported a case of primary fibrosarcoma of the lung. X-ray diagnosis of chest tumors was discussed by Doctor Jelte.

The second paper of the evening was by W. O. French, Jr., on "Coccidioid Granuloma." Doctor French reported a case which appeared to be a primary coccidioid infection of the peritoneum which is the first recorded case of coccidioides limited to the peritoneal cavity. In the discussion of this paper Dr. H. J. Templeton showed two cases of well developed, definitely proved coccidioid granuloma, both of which have completely healed under a treat-



ment consisting of intramuscular injections of colloidal copper together with vaccine therapy. This paper was discussed by Doctors Frank Bowles, L. M. Boyer, and W. A. Perkins.

The third paper of the evening was a discussion of the physical findings in a group of depressed individuals by Sidney K. Smith. Doctor Smith pointed out the importance of seeking a physical background for mental depression of various types. Doctor Smith's paper was discussed by Dr. Q. O. Gilbert. Following the scientific program the annual reports of the chairmen of the various standing committees and of the president and secretary-treasurer were read. The tellers reported the results of the annual election, and our new president, Dr. A. M. Meads, was called to the chair.

GERTRUDE MOORE, *Secretary*.

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#### CONTRA COSTA COUNTY

The Contra Costa County Medical Society met on December 10, at Richmond.

Election of officers for 1930 resulted as follows: President, J. W. Bumgarner of Richmond; vice-president, S. N. Weil of Selby; secretary-treasurer, L. H. Fraser of Richmond. Delegate for 1930 and 1931, U. S. Abbott of Richmond. Alternate delegate for 1930 and 1931, J. F. Feldman of Richmond.

L. A. Hedges of Richmond was elected for three-year term as censor, to serve with H. L. Carpenter and John L. Beard, both of Martinez.

A committee composed of U. S. Abbott and L. H. Fraser of Richmond and J. M. McCullough of Crockett was chosen to represent the society at a mass meeting to be held at Memorial Hall, Richmond, on December 13, to discuss measures to secure a veterans' hospital for the East Bay region.

L. St. John Hely presided over this meeting.

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The annual banquet of the Contra Costa County Medical Society was held on December 7 at the new Hotel Carquinez, in Richmond. This social gathering was pronounced a most enjoyable event by all who attended, with friendships engendered and mirth and pleasure predominant features. All those who were absent missed a real treat.

Dr. J. W. Bumgarner presided as toastmaster in the absence of President L. St. John Hely, and kept things lively throughout the evening.

A delicious turkey dinner was served; there was excellent music, furnished by the Milano Trio, between courses. Dancing was enjoyed by all at the conclusion of the banquet.

It was the consensus of opinion that such social contact among the members of the society and their wives goes far toward producing a close bond of friendship.

Those present were: Dr. and Mrs. J. W. Bumgarner, Dr. and Mrs. G. W. Bumgarner, Dr. and Mrs. J. F. Feldman, Dr. M. Keser and Miss Driscoll, Dr. Rosa Powell, and Miss Redmond, Dr. and Mrs. U. S. Abbott, Dr. and Mrs. F. W. Overdahl, Dr. and Mrs. I. O. Church, Dr. and Mrs. H. D. Neufeld, Dr. and Mrs. M. L. Fernandez, Dr. and Mrs. J. M. McCullough, Dr. and Mrs. S. N. Weil, Dr. and Mrs. L. A. Hedges, Dr. and Mrs. L. H. Fraser, Dr. and Mrs. Hall Vestal.

S. N. WEIL, *Secretary*.

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#### KERN COUNTY

Thursday evening, November 21, the Kern County Medical Society held its monthly meeting at the Kern General Hospital, Bakersfield.

Seymour Strongin, Keene, resident physician of Stony Brook Retreat, and M. A. Williamson of Lone Pine were elected to membership in the society.

Officers for the coming year were elected as follows: E. A. Schaper, president; E. S. Fogg, vice-president; George E. Bahrenburg, secretary-treasurer.

F. J. Gundry was appointed as delegate to the state convention to be held next year in Del Monte, with J. M. Kirby as alternate.

Arrangements were made for our annual banquet, which is to be held at the Bakersfield Club, Thursday evening, December 12.

Rex Duncan of the Oncologic Institute of Los Angeles was the speaker of the evening, and gave a most interesting address on the treatment of cancer. He stated that cancer was on the increase; that at the present time it was the cause of 10 per cent of all the deaths of those over forty years of age. This disease occupies second place as the cause of death, and now destroys more lives than tuberculosis, which occupies fifth place. Doctor Duncan emphasized the fact that cancer is not hereditary. It is exceedingly important that an early and accurate diagnosis be made. He brought out the fact that frequently cases first seen by irregular practitioners who fail to recognize the condition present are later seen by competent medical men when they are so far advanced as to be beyond help. Cancer at present is treated by x-ray, radium, cautery, and surgery. Best results are secured in many early cases of cancer by giving x-ray and radium treatments. In selected cases cautery and surgery may be used to advantage.

While the medical society was in session the wives of physicians met in another part of the General Hospital, where a Woman's Auxiliary to the county medical society was organized. The following officers were elected: Mrs. F. A. Hamlin, president; Mrs. F. J. Gundry, first vice-president; Mrs. A. R. Moodie, second vice-president; Mrs. C. S. Compton, secretary-treasurer.

In the future the Woman's Auxiliary will have a monthly meeting in conjunction with the regular meeting of the Kern County Medical Society.

E. A. SCHAPER, *Secretary*.

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#### SACRAMENTO COUNTY

The Sacramento Society for Medical Improvement met at the Senator Hotel on November 19, and were called to order by Doctor Pope at 8:40 p. m.

The minutes of the previous meeting were read and approved.

Dr. W. A. Beattie reported a case. This was a case of dysentery in an infant six and one-half months of age. The child was in the third week of sickness and was given carbohydrates by mouth, colonic flushes and saline solution by hypodermoclysis. After two days the patient refused food, and a generalized edema resulted. Râles were heard in the chest. A catheterized specimen of urine showed many hyaline casts. The saline was discontinued and the edema began to clear, and within forty-eight hours after the discontinuing of the saline the urine had cleared of casts.

The paper for the evening, "Acute Perinephritic Abscess," was presented by Dr. G. Rhodes of San Francisco.

Doctor Rhodes had recorded and studied a list of over thirty cases and based his findings on these cases. In almost all of these cases the patient gave a history of a previous skin infection, such as boils or carbuncles, and no previous history of a kidney infection. In children the secondary infection usually localizes in the bone marrow while in adults the common site is a perinephritic abscess.

Showers of organisms are squeezed out of the original focus and these lodge in the perinephritic fat. The fat has a poor circulation and the arteries here are end arteries, being branches of the renal arteries. Rupture of renal abscesses may likewise cause the same. It is not due to the lymphatics.

The staphylococcus is the causative organism. It forms clumps and more easily blocks the arteries. Streptococcus is rare.

In children it is hard to diagnose. Lassitude occurs and they run a septic course. In adults the course



may be slower and they may have tenderness over the appendix. Acute symptoms come on suddenly. A severe pain usually occurs over the kidney region. They may have general infection symptoms, or it may be referred to the hip.

The polymorphonuclear count is high. Cystoscopic examination is negative, and x-ray is the first positive evidence. This is due to an obliteration of the lateral border of the psoas muscle. X-ray at the early onset shows a shadow and the shadow then is lost. The persistent obscuring of the shadow is the best diagnostic factor. A scoliosis of the lumbar vertebrae away from the abscess may occur.

The paper was discussed by Doctors Hale, Beach, Rulison and Lee, and was well illustrated with lantern slides.

A communication from the Eastman Kodak Company, in regard to films for teaching, was read.

There being no further business the meeting adjourned.

HANS F. SCHLUTER, *Secretary*.

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#### SAN BERNARDINO COUNTY

Minutes of the regular meeting of the San Bernardino County Medical Society held at the San Bernardino County Hospital on December 3.

The meeting was called to order by Dr. A. T. Gage, first vice-president, in the absence of the president.

The minutes of the previous meeting were read and approved.

There being no business to attend to, the following program of the evening was immediately begun:

The Injection of Varicose Veins with Sclerosing Solutions, and illustrated by motion pictures, was the subject of the first paper by Dr. Thomas O. Burger and Dr. Harold G. Holder, San Diego. Discussion opened by Dr. C. G. Hilliard.

Circulatory Disturbances of the Extremities was presented by Dr. Joseph K. Swindt, Pomona. Discussion opened by Dr. Philip Savage.

Luncheon was served at 10:30 o'clock, seventy-five members being present.

While the regular medical meeting was in progress the formation of a Woman's Auxiliary to the California Medical Association was going on in the nurses' home.

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#### SAN DIEGO COUNTY

In honor of Admiral Stitt and Captain Carpenter the combined organizations of the San Diego County Medical Society and the Naval Hospital met at the Naval Hospital on the evening of November 12. The speaker of the evening was Dr. Carl Rand, neurological surgeon of Los Angeles, who talked on the diagnosis of brain tumors. Doctor Rand's discourse was very interesting and helpful, particularly to the general practitioner. He pointed out that many cases of brain tumor went undiagnosed until curative treatment was impossible, and therefore an especial burden lay upon the general practitioner who first saw these patients. The more outstanding features in the history and physical examination were stressed with an outline of the more important diagnostic measures. The more technical features, particularly of operative treatment, were outlined. After the meeting, light refreshments and a social time were enjoyed.

On November 5 and 6, Dr. Thomas Addis, professor of medicine at the Stanford University Medical School, addressed the San Diego Academy of Medicine on the diagnosis and treatment of Bright's diseases. The special clinical methods developed by Doctor Addis during the past fifteen years, and which are now widely used both in this country and abroad as a basis for diagnosis and prognosis in this group of diseases, were described. The second lecture was preceded by a short clinic in which patients representing the major forms of Bright's disease were pre-

sented and served as a basis for a general consideration of each type. Doctor Addis is at the present time the president of the American Society for Clinical Investigation. The following officers were elected for the San Diego Academy of Medicine for 1930: A. E. Elliott, president; William E. Sisson, vice-president; C. O. Tanner, treasurer; William W. Belford, secretary.

The following officers were elected for the San Diego County Medical Society for the year 1930: C. M. Fox, president; F. H. Carter, vice-president; W. H. Geistweit, Jr., secretary; William W. Belford, treasurer. Councilors: W. F. McColl, L. C. McAmis, and W. O. Weiskotten. Delegates: F. L. Macpherson and T. O. Burger (two-year term); C. E. Rees and B. J. O'Neill (one-year term). Alternates: A. J. Thornton, G. B. Worthington, and L. W. Zochert (two-year term); E. S. Coburn (one-year term).

Doctors T. Coe Little, A. J. Thornton, J. G. Omelvena, O. G. Marsh, E. S. Coburn, George B. Worthington, L. W. Zochert, and Mr. W. C. Crandall attended the excellent program of the Southern California Medical Association at Los Angeles, November 8 and 9. L. W. Zochert has joined the ranks of the "air-minded," and flies back and forth to northern conventions.

Henry A. Christian, professor of medicine of Harvard Medical School, will give a lecture on January 25 at the Scripps Clinic. The doctor will choose his own subject.

ROBERT POLLOCK.

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#### SAN JOAQUIN COUNTY

The annual meeting of the San Joaquin County Medical Society was held at the banquet table in the dining room of the Stockton Country Club, December 5, at 7 p. m.

Twenty-nine members and five visitors were present: Doctors R. Flarity, R. A. Hunt and H. O. Tucker, guests of Dr. Barton J. Powell; T. L. Sutton of Stockton; and Langley Porter, dean of the University of California Medical School, guest and speaker of the evening.

The members present were: Doctors N. P. Barbour, J. W. Barnes, J. F. Blinn, R. A. Buchanan, C. A. Broaddus, H. S. Chapman, Fred J. Conzelmann, J. T. Davison, J. F. Doughty, Linwood Dozier, F. T. Foard, P. B. Gallegos, S. Hanson, C. V. Holliger, J. P. Hull, H. E. Kaplan, R. V. Looser, F. S. Marnell, R. T. McGurk, T. C. O'Connor, F. J. O'Donnell, H. C. Peterson, B. J. Powell, D. R. Powell, G. H. Rohrbacher, F. B. Sheldon, J. J. Sippy, H. Smythe, and C. V. Thompson.

Before being seated at the banquet table the members bowed their heads in a momentary silence in memory of our departed colleagues, Doctors C. L. Six, J. E. Oliver, and F. P. Clark.

The annual meeting was called to order at 8:30 p. m. by C. V. Thompson, president presiding.

The minutes of the previous meeting were read and approved. The secretary-treasurer read his annual report, which was approved and ordered filed.

The chairman called for the report of the tellers which read as follows:

H. E. Kaplan, president; G. H. Rohrbacher, first vice-president; F. T. Foard, second vice-president; C. A. Broaddus, secretary-treasurer.

Board of Directors—Drs. C. A. Broaddus, H. S. Chapman, C. F. English, R. T. McGurk, H. E. Kaplan, D. R. Powell, J. J. Sippy, Hudson Smythe, C. V. Thompson.

Admission Committee—F. J. Conzelmann, chairman; J. F. Blinn, H. J. Bolinger, B. J. Powell, Hudson Smythe.

Ethics Committee—J. W. Barnes, chairman; H. S. Chapman, C. F. English, D. R. Powell, Margaret H. Smyth.

Finance Committee—J. V. Craviotto, chairman; J. D. Dameron, D. R. Powell.



Program Committee—G. H. Sanderson, chairman; P. B. Gallegos, G. H. Rohrbacher.

State Delegates—J. W. Barnes, B. J. Powell.

Alternates—R. T. McGurk, C. V. Thompson.

The chair presented Dr. Langley Porter, dean of the University of California Medical School, who gave an interesting and practical talk on Greek medicine, illustrated by lantern slides.

FRED J. CONZELMANN, *Secretary*.

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#### SAN MATEO COUNTY

The regular meeting of the San Mateo County Medical Society was held at the Oak Tree Inn in San Mateo on the evening of November 20.

Following dinner and a social hour, Dr. A. C. Reed of San Francisco gave an exceedingly interesting lecture, illustrated by slides compiled while on a research trip in the tropics in the interests of tropical medicine. Much of interest was learned concerning not only the medical status of these countries, but also their customs and culture.

In a short business session following, it was decided to concentrate the efforts of the society on obtaining an isolation hospital in this county at the Community Hospital at Beresford.

Dr. A. Gerlach, resident physician at the Community Hospital, was admitted as a new member to the society.

The next meeting will be a joint meeting with the Santa Clara County Medical Society, to be held December 18, in San Mateo, the place to be announced at a later date.

ERMA B. MACOMBER.

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#### SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held at the St. Francis Hospital on Monday evening, December 9.

The meeting was called to order at 8:30 o'clock by President Brush.

The minutes of the previous meeting were read and approved.

As the annual meeting is to be held Monday evening, January 13, 1930, the president appointed the following committees:

Scientific Program—Dr. Ullmann, chairman; Dr. Robinson and Dr. Atsatt.

Supper—Dr. P. C. Means, chairman.

Entertainment—Dr. Irving Wills, chairman.

It was the unanimous decision of the members present that the annual meeting be held at the University Club.

It was moved, seconded and carried that the program and entertainment committees draw from the treasury sufficient funds to cover any nominal expenses.

The scientific program was opened by a paper by Dr. Rexwald Brown on "Indication for Hysterectomy in a Fibroid Uterus." This paper was discussed by Doctors Ullmann, Robinson, Eder, Sansum, Geyman, Shelton, and Schurmeier.

Doctor Henderson then gave a paper on "Myelogenous Leukemia," with a report of a case. This was discussed by Doctors Ullmann and Brush.

There being no further business the meeting adjourned.

WILLIAM H. EATON, *Secretary*.

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#### SANTA CRUZ COUNTY

The November meeting was held November 21 at the Hotel Reseter, Watsonville. Following a very enjoyable dinner, President Fehlman called the meeting to order and the routine business was attended to.

The application for membership of Dr. F. P. Shenk, who recently came to Santa Cruz as an eye, ear, nose, and throat specialist, was read and referred to the board of censors. Election of officers for 1930 resulted as follows: M. F. Bettencourt of Watsonville, president; J. C. Farmer of Felton, first vice-president; O. C. Marshall of Watsonville, second vice-president; S. B. Randall of Santa Cruz, secretary-treasurer. Censors: P. T. Phillips, W. G. Hatch, and E. Eiskamp. Delegate: L. Liles of Watsonville. Alternate: P. T. Phillips of Santa Cruz.

Dr. J. Lumford of Oakland was the guest speaker of the evening and presented a very commendable illustrated discussion of the subject of "Ringworm of the Feet." Diagnosis, treatment, and prophylaxis were considered and discussed by those present. The wide distribution of this type of fungus infection and the difficulties encountered in its eradication added to the importance of Doctor Lumford's paper.

The following were present: Visitors—Dr. Tipton of Watsonville, Dr. F. P. Shenk of Santa Cruz, and Dr. Lumford of Oakland. Members: Bettencourt, Congdon, Farmer, Fehlman, Gaynor, Harrington, Marshall, Nittler, P. T. Phillips, A. L. Phillips, and Randall.

SAMUEL B. RANDALL, *Secretary*.

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#### SONOMA COUNTY

The Sonoma County Medical Society held its last meeting of the year on December 12 at the Petaluma Hotel, Petaluma. The meeting was well attended to hear Dr. Dudley Smith speak on rectal diseases. His subject was covered very ably, especially from the practical side, which was very greatly appreciated by the society.

Dr. J. H. Wright and Dr. B. L. Baldwin, both of Healdsburg, were elected to membership.

The following officers were elected for the ensuing year: President, Chester Marsh of Sebastopol; vice-president, A. Morse Bowles of Santa Rosa; secretary, J. Leslie Spear of Santa Rosa; treasurer, T. Hubert Reiss of Santa Rosa; censor, W. C. Shipley of Santa Rosa; delegate, J. Walter Scawell of Healdsburg; alternate, Stuart Z. Peoples of Petaluma.

J. LESLIE SPEAR, *Secretary*.

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#### TULARE COUNTY

The regular meeting of the Tulare County Medical Society was held at Motley's Café in Visalia. Sixteen persons were present for the dinner at 6:30 o'clock, and a few arrived later.

Members present were: Doctors Annie Bond, E. C. Bond, Lipson, Rivin, Fowler, Furness, Zumwalt, Seligman, Tourtillott, Preston, Campbell, Ginsburg, Rosson, and Kohn.

The meeting was called to order at 7:30 o'clock by President Furness.

The minutes of the last meeting were read and approved.

The following officers were elected for the coming year: H. G. Campbell, president; Ray Rosson, vice-president; S. S. Ginsburg, secretary-treasurer; Gilbert Furness, delegate; H. G. Campbell, alternate; D. L. Seligman, censor.

Dr. William B. Faulkner of San Francisco was present and gave us a talk on surgery of the chest. The talk was illustrated with lantern slides, and was especially valuable from the standpoint of diagnosis and bronchoscopy. It was moved that a vote of thanks be given Doctor Faulkner for his excellent talk and the trouble he took to come down and address us.

A short discussion followed, and the meeting adjourned at 9:40 o'clock.

HORACE G. CAMPBELL, *Secretary*.

## CHANGES IN MEMBERSHIP

## New Members

*Alameda County*—John Joseph Carden, Herbert C. Bolstad.

*Monterey County*—Lavelle P. Davlin, Roy M. Fortier.

*Sacramento*—Louis Charles Barrette, Irene Knox Mugford, Wayne Evans Pollock, Dorothy Walsh Schallig.

*San Bernardino County*—Darrell E. Hayhurst.

*San Diego County*—Sheridan A. Lockwood, Stephen A. Parowski.

*San Francisco County*—Harry H. Jacob.

## Transferred Members

Orville Rockwell, from San Francisco to Napa County.

Elisabeth McVeen Saphro, from Los Angeles to Monterey County.

H. Spencer Hoyt, from Los Angeles to Monterey County.

## Deaths

**Aikin, Ilo Rafenel.** Died at Oakland, December 10, 1929, age 53 years. Graduate of Hahnemann Medical College of the Pacific, San Francisco, 1898. Licensed in California, 1898. Doctor Aikin was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

**Berndt, Richard M. H.** Died at San Francisco, November 16, 1929, age 73 years. Graduate of the University of California Medical School, 1893. Licensed in California, 1894. Doctor Berndt was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Bullock, Newell Harris.** Died at San Francisco, November 13, 1929, age 56 years. Graduate of Rush Medical College, Illinois, 1908. Licensed in California, 1908. Doctor Bullock was a member of the Santa Clara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Miller, Ulysses Grant.** Died at Los Angeles, November 27, 1929, age 61 years. Graduate of Marion-Sims College of Medicine, Missouri, 1891. Licensed in California, 1904. Doctor Miller was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

**Mott, George Hervey.** Died at Pacific Grove, December 1929, age 64 years. Graduate of Western Reserve University School of Medicine, Cleveland, 1888. Licensed in California, 1926. Doctor Mott was a member of the Monterey County Medical Society, the California Medical Association, and the American Medical Association.

**Reynolds, Clyde G.** Died at Hilt, December 6, 1929, age 33 years. Graduate of University of Nebraska College of Medicine, Omaha, 1924. Licensed in California, 1925. Doctor Reynolds was a member of the Siskiyou County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Simpson, Frank William.** Died at Hayward, December 8, 1929, age 53 years. Graduate of University of California Medical School, 1900. Licensed in California, 1900. Doctor Simpson was a member of the Alameda County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Zbinden, David Burdett.** Died at Alhambra, November 20, 1929, age 40 years. Graduate of Vanderbilt University School of Medicine, Nashville, Tennessee, 1913. Licensed in California, 1917. Doctor Zbinden was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

## THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION

## OFFICIAL NOTICE

The Woman's Auxiliary of the California Medical Association is happy to call to your attention the editorial on page 351 of the November CALIFORNIA AND WESTERN MEDICINE, regarding their organization, and request that if you have not already done so that you appoint a committee on organization as suggested in the article.

May I ask that you keep me informed as to the result, and send me the names of one or two women from your county who will probably be active in the formation of the unit, as I hope to have material from the national organization for their use.

The southern counties are responding with enthusiasm, and I hope the North will soon be as active. As you know, the object of the Auxiliary is to be all that its name implies—an aid—a reserve force—an auxiliary! Organized for the purpose of responding to any call from the medical profession. To promote dependable health education, instead of leaving it to those who are interested in spreading cult propaganda. Every physician's wife should feel it a privilege to have a part in this work.

May we have your hearty coöperation?

JEAN ROGERS, *President.*

Petaluma, Sonoma County.

## A COUNTY AUXILIARY'S WORK \*

The Woman's Auxiliary to the American Medical Association is an organization composed of the combined membership of the state auxiliaries, which in turn are made up of auxiliaries to county medical societies.

The first auxiliary was formed in 1917 at Dallas, Texas. Out of that grew similar organizations all over the state. In 1919 a state auxiliary was organized in San Antonio, Texas.

Other states became interested in the work and in St. Louis, 1922, during the meeting of the American Medical Association, the matter of forming a national auxiliary was presented to the House of Delegates. It was endorsed by that body and the Woman's Auxiliary to the American Medical Association was organized, with nine states enrolled.

It is now in its fourth year of national activity, having twenty-seven states already organized, with others in the process of organization—more than half the states in the Union!

Where there is a county medical society there should be an auxiliary. It has been uniformly noted that there is more interest and enthusiasm, and a greater spirit of comradeship among the members of the county medical society if there is an active auxiliary working in the community.

The National Auxiliary does not attempt to dictate, but desires to coöperate with all auxiliaries in carrying out their work.

\* \* \*

The object of the Woman's Auxiliary to the American Medical Association is to be all that its name implies—an aid, a reserve force—an auxiliary! Organized for the purpose of responding to any call from the medical profession.

To do all the work assigned to it from time to time by the American Medical Association.

To promote closer social contact between the families of physicians.

To assist in lightening the burdens of humanity.

To help preserve the health of the people.

The members of the Woman's Auxiliaries to the American Medical Association are those who have

\* Abstract of a leaflet printed by the National Auxiliary, and here presented for the information of newly organized county auxiliaries of California.



paid their annual dues to the national organization through their county and state auxiliary.

Where there is no local auxiliary a physician's wife may become a member-at-large by paying annual dues of \$2. Wives of the members of the Medical Corps of the Army, the Navy, and the Public Health Service are especially invited to become members-at-large, if it is impossible for them to have county affiliations.

Each state sends its auxiliary president and president-elect, two delegates and their alternates to represent it at the annual session which meets at the same time as the American Medical Association.

Every phase of the work is first passed upon by the executive board, which meets just before the annual session. After the election of officers, the new executive board is called together to hear the plans outlined by the incoming president.

Another called meeting is usually held in the fall before the activities begin. Matters of immediate importance should be referred to the president and members of the Liaison Committee. This committee is appointed by the trustees of the American Medical Association.

\* \* \*

For this year the National Auxiliary board has accepted the following recommendations from the president:

To organize auxiliaries in unorganized states and to urge all state presidents to form auxiliaries wherever there is a county medical society.

To outline health programs approved by the Liaison Committee to be presented before other organizations.

To secure, if possible, moving pictures to illustrate the importance of the annual physical examinations by the family physician. Each member of every household, servants included, should be examined.

To recommend to all clubs that they place capable physicians' wives in charge of club health departments in order to secure authoritative programs.

To assist in providing health talks over the radio by prominent physicians and health officers. These speakers should be appointed by the County Medical Society.

\* \* \*

In order that the greatest possible good shall be accomplished it is necessary that the Woman's Auxiliary to the American Medical Association have the full coöperation of all the members of the American Medical Association and their wives. It is the earnest endeavor of the Auxiliary to bring its work to the attention of all who are interested in the welfare of our people.

Every physician's wife should feel it a privilege as well as her duty to promote dependable health education, not leaving it in the hands of those who are interested in spreading the propaganda of various cults.

She can aid materially in the auxiliary's effort to impress upon all club members a proper conception of the real mission of organized medicine, especially in its crusade of preventive medicine.

She may gain much from her club activities, but she can give even more to her club coöperating with the auxiliary in its health education program.

A woman forfeits none of her own happiness nor her family's when she lends her time and influence beyond the confines of her own household. Her power is made greater and her outlook on life clearer by her contact with other women.

\* \* \*

#### Activities

The work of county auxiliaries may be divided into three groups—social, philanthropic, and educational.

Auxiliaries should meet each month from October to June, making reports and recommendations.

In addition to the reports of the committees, a paper may be read or a speaker provided to address

the members on subjects of particular interest to them.

A social hour may follow with light refreshments.

#### I. Social Group

This group may be divided into the following committees: Membership, Telephone, Courtesy, and Entertainment.

The Membership Committee keeps the members active in securing new members. This committee visits the wives of members of the County Medical Society, enlisting interest in the local work.

The Telephone Committee divides the membership, each taking an equal number of names; it is their duty to telephone each member at least one week in advance to remind them of the time and place of meeting, and to ascertain how many can attend. The lists of acceptances are turned over to the chairman of the entertainment so that she may know for how many to provide. The chairman of the Telephone Committee informs the members of the Executive Board of their meetings.

When the medical society wishes some prompt service from the auxiliary, the Telephone Committee can get the information to the entire membership within a few hours.

The Courtesy Committee calls upon the wives of physicians soon after they become members of the County Medical Society.

If a member is ill or bereaved, this committee lends its sympathy and service. Visits are made also when out-of-town physicians' families are ill in local hospitals. Courtesies are extended to wives of physicians while they are visiting in the city.

The Entertainment Committee may select the place of meeting, appoint hostesses for the season, and provide refreshments, except when an individual member wants to entertain. Each member may be assessed her pro rata for the entertainments, or it may be added to the dues for the year. The refreshments should be light and within the means of all the members.

The first meeting of the season may be an afternoon tea given in honor of the officers. The president makes a short talk and announces committees which she has appointed to carry out the plans for the year.

Near the holiday season an evening affair may be given in honor of the president and officers of the County Medical Society.

The last meeting of the season may be an afternoon program given in honor of the mothers of the physicians.

The annual reports and election of officers may come before the program.

#### II. Philanthropic Group

This group is divided into as many committees as are necessary to carry on the work as outlined by each individual auxiliary.

It is recommended not to undertake too much at first, but to increase the activities as the interest grows. There is always more to be done than there are funds available with which to "carry on." Each auxiliary selects the greatest need of its community and undertakes to make its influence felt by coöperating in every possible way with charitable enterprises of the city.

Committees and subcommittees undertake the following:

To visit all the charity wards of the hospitals, taking fruits, flowers, etc.

Books and toys are taken to the Children's Hospitals, and a story hour provided for the convalescents.

Layettes are made for needy mothers.

Showers of linen and clothing are given for the Baby Hospitals.

Surgical dressings and aprons made for doctors and nurses in their charity work.

Gowns and bedjackets for Tuberculosis Hospitals.

Visits are made to Institutions for the Aged, furnishing them with diversion and entertainment.

Soldiers, old and young, are provided with games, radios, victrolas, edibles, automobile rides, Christmas trees, etc.

A milk fund is provided for undernourished school children.

Healthful school lunches prepared and served to school children at minimum cost.

First-aid tents furnished Boy Scouts, rest tents for Salvation Army camps.

Stockings filled and sent to Empty Stocking Crusade, Christmas boxes furnished Red Cross for distribution.

Loans to needy physicians' families.

### III. Educational Group

This group consists of two important committees—Educational and Program—and as many subcommittees as are needed to carry on the work.

The Program Committee selects the subjects to be discussed at each meeting and provides the speakers.

This group prepares a tribute to the members who die during the year, which is read at the last meeting of the season.

Outline campaigns for securing birth registrations.

Coöperate with Chambers of Commerce and their health programs.

Furnish reports each month of current events in medical progress.

Interest boys and girls in giving health plays in schools.

Coöperate with health officers in their work, especially in rural districts.

Furnish good speakers to go before clubs to present health programs with moving-picture illustrations.

Create sentiment for county health units.

Assist legislative committees of County Medical Societies, when needed, in promoting good health measures—but carefully avoiding participation in any kind of politics whatsoever, except upon the recommendations of the local county or state medical organization or the Liaison Committee to the auxiliary.

The Health Education Committee makes a study of the subject to be discussed throughout the year.

Health laws pertaining to county and state.

What constitutes pure milk and water.

Food and sanitation.

Midwife problems.

History of medicines.

Lives of great physicians.

History of American Medical Association, California Medical Association, etc.

Offer scholarships to sons and daughters of physicians.

Gives prizes for the best:

Essay on health.

Physical test of school children.

Sanitary school buildings.

Best drilled R. O. T. C.

Boy Scout who makes best physical record.

Cleanest block in city.

### KERN COUNTY

At the request of the state medical society, the wives of the members of the Kern County Medical Society met in the library of the Kern General Hospital at 8 o'clock, Thursday, November 21, to form an auxiliary to the men's organization. Those present were: Mesdames F. A. Hamlin, F. G. Gundry, C. H. Fox, W. H. Moore, C. S. Compton, G. E. Bahrenburg, K. S. McKee, R. M. Jones, A. E. Schaper of Keene, A. R. Moody and Johnston of Taft.

Mrs. F. A. Hamlin, acting as temporary chairman, read the constitution and by-laws of the Auxiliary, explaining its purpose. The following officers were then unanimously elected to serve for the ensuing year: Mrs. F. A. Hamlin, president; Mrs. F. G. Gundry, first vice-president; Mrs. A. R. Moody of Taft, second vice-president; Mrs. C. S. Compton, secretary-treasurer.

The constitution and by-laws were then formally adopted, and it was agreed to meet on the third Thursday of every month at the County Hospital. It was decided to serve light refreshments and have some entertainment each meeting, with the idea of becoming better acquainted. Mrs. F. A. Hamlin, Mrs. G. E. Bahrenburg, and Mrs. R. M. Jones were appointed as a committee for the first meeting.

Meeting was adjourned.

EDNA C. COMPTON, *Secretary*.

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### LOS ANGELES COUNTY

Formation of Woman's Auxiliary of the California Medical Association.—A committee composed of Mrs. James F. Percy (chairman), Mrs. Walter P. Bliss, and Mrs. George G. Hunter called a meeting of the wives, daughters, sisters, and widows of physicians in good standing in the Los Angeles County Medical Association on December 27, 1929, to form a Woman's Auxiliary to the Los Angeles County Medical Association.

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### SAN BERNARDINO COUNTY

Minutes of the meeting of the Woman's Auxiliary to the California Medical Association which met in San Bernardino on December 3.

The wives of the doctors of the San Bernardino County Medical Society were invited to attend a meeting at the nurses' home of the County Hospital, December 3, at 8 p. m.

Mrs. A. L. Weber of Upland, one of the committee appointed by the councilors of the San Bernardino County Medical Society, was in the chair and called the meeting to order.

Letters from Dr. Emma Pope and Mrs. Jean Rogers, explaining the purpose of the meeting were read, also the constitution of the Woman's Auxiliary of the California Medical Association.

Discussions and explanations followed.

Mrs. Frank H. Pritchard of Colton then moved we form an auxiliary to the San Bernardino County Medical Society and adopt the constitution of the Auxiliary of the California Medical Association.

Mrs. Cherry of Rialto seconded the motion. The chairman put the question, and the motion was unanimously carried.

The chairman proceeded with the election of officers. Mrs. F. E. Clough was nominated for president. Nomination seconded and was unanimously elected.

Mrs. Weber then invited Mrs. Clough to take the chair. Mrs. Clough continued with the election, and the following officers were unanimously elected: Mrs. Walter Pritchard of Colton, first vice-president; Mrs. A. L. Weber of Upland, second vice-president; Mrs. C. L. Curtiss of Redlands, secretary-treasurer.

Mrs. Mulvane, superintendent of nurses of the County Hospital, offered the nurses' home for either social or business meeting any time it was needed.

Fifteen out of the seventeen women present joined the new society.

Letters from Mrs. W. E. Macpherson and Mrs. O. I. Cutler of Loma Linda, expressing their regrets that they could not be present at our first meeting but hoped to be at later ones, were read by the secretary.

Nominations for delegates to the state meeting were then in order. Mrs. Frank Pritchard nominated all of the officers. Mrs. Emmons made an amendment to the motion that the board of directors designate



which ones should be delegates and alternates. This motion was seconded, voted and carried.

Mrs. Walter Pritchard then made a motion that tentative dues be set at \$1. Seconded and carried.

Motion was made by Mrs. Walter Pritchard that a meeting be held the first Tuesday in March, 1930 at the San Bernardino County nurses' home. Motion was seconded and carried.

Next motion made was that the first and second vice-presidents, with the board of directors, be responsible for a social meeting, this meeting and the next business meeting.

Meeting was then adjourned by motion from the floor.

MRS. ETHEL E. CURTISS, *Secretary*.

## NEVADA STATE MEDICAL ASSOCIATION

W. A. SHAW.....	President
R. P. ROANTREE, Elko.....	President-Elect
H. W. SAWYER, Fallon.....	First Vice-President
E. E. HAMER, Carson City.....	Second Vice-President
HORACE J. BROWN.....	Secretary-Treasurer
R. P. ROANTREE, D. A. TURNER, S. K. MORRISON.....	Trustees

### COMPONENT COUNTY SOCIETIES

#### WASHOE COUNTY

The Washoe County Medical Society met on Tuesday evening, November 12, at the City Hall, Reno. Dr. J. L. Robinson, president, in the chair.

Applications of three new members were endorsed by the board of censors, and the secretary was ordered to notify the same.

The scientific program for the night was a symposium on pneumonia. Owing to the absence of three of the essayists, the program was considerably incomplete. However, Doctor Lane, whose part was the obtaining of the pneumonia record of the state for the past ten years, gave as complete a report as was possible. There seems to be a decided carelessness or an evasion by the physicians regarding the reporting of reportable cases as listed by the state secretary. Records are so incomplete as to be practically worthless. Doctor Lane had made a most worthy effort by going to Carson and conferring there with Doctor Hamer, but the records obtainable were far from complete. We hope that the physicians of the state will coöperate with Doctor Hamer in his insistent effort to have the proper reports come in as requested.

Dr. M. A. Robinson, one of the state's veteran physicians and anesthetists, gave an elaborate résumé on the subject of postoperative pneumonia, which was of considerable interest in view of the fact that the profession is now fully aware that the selection of an anesthetist is about as necessary as the selection of the surgeon. Doctor Robinson will elaborate the paper for a future occasion.

The closing meeting of the year will be held, place yet to be announced, on the evening of December 10. The speaker will be Dr. George R. Smith, superintendent of the Nevada State Hospital. Doctor Smith will speak on the conditions of the insane of the state. We bespeak a good attendance and good time.

There being no further business the meeting adjourned.

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The last meeting of the year for the Washoe County Medical Society was held at Hutton's Hut, on the outskirts of Reno, on Tuesday evening, December 10.

This meeting being President's night, the retiring president, Dr. J. L. Robinson, reserved the hut for the occasion and the genial host served those present with a bounteous turkey dinner. Music and refreshments made the twenty-five men present a

happy congenial company. Owing to the previously inclement weather, the secretary received a number of regrets from many who could not attend.

Two new names for membership were read and referred to the board of censors. The present membership is fifty-two. There are several prospects in sight for a bigger and more active membership. In the secretary's letter announcing the meeting, it was suggested and thought advisable that the society reach out to all surrounding towns where a medical society does not exist and invite these unaffiliated county men to join the Washoe County Society. If they cannot attend the meeting during the inclement seasons of the year, their membership and discussion when they are able to be present will be mutually helpful.

After the dinner was served, Doctor Robinson, who has done splendid work during the year in investigating conditions in California, with reference to the necessity of Washoe County having a community hospital, read a concise, fact-bearing paper, setting forth many substantial arguments as to the present-day needs of such a hospital. In summarizing the future growth of Reno, with its great outlying territory, he dwelt upon the past substantial growth of Reno, showed how it was a center for railroad, airway, and automobile travel. The fact that with our tourist travel for the past summer, the hotels could not take care of the tourist patronage, that new enterprises were under contemplation, new hotels to be constructed on Lake Tahoe, that the Lassen Park project was under way, and because of many other business enterprises, Doctor Robinson showed that to keep pace with the growing need for community hospitalization we should bestir ourselves, as a united profession, to secure the final approval of thirty per cent of the taxpayers to sign up for a community hospital at the fall election of 1930. With this done, the people of Washoe County could establish a hospital similar in function to the great Los Angeles hospital now about completed and the beautiful Highland Hospital in Oakland. Public hospitalization—not of the old-fashioned type for paupers—is the coming thing of the future, and, as Doctor Robinson well stated, community hospitalization is a demand to be considered in exactly the same class as community schools and community police protection. It is the coming thing whereby any citizen can, if he so elects, choose the benefit of medical and surgical attendance from the community in which he has lived and helped to build up. A community hospital will solve the question of the public of today, wherein it is so frequently said that but two classes of people can receive good medical and surgical care, namely, the indigent and the millionaire. This type of a hospital will relieve people of moderate means of painful embarrassment, and when they are unfortunate in being ill they can, with this new form of extended aid, avail themselves of the benefits of a community hospital at such prices as they can afford to pay.

Doctor Robinson's paper had the earmarks of well digested thought, facts summarized and presented in a forcible manner, and was well received.

Dr. George H. Smith, superintendent of the Nevada State Hospital for the Insane, followed with a splendid paper giving a résumé of the conditions of the insane population of Nevada. For lack of space, we cannot enlarge upon this excellent presentation, except to say that those not present missed a good thing.

The election of officers for the ensuing year resulted in the election of Dr. E. E. Hamer, secretary of the Nevada State Board of Health, as president; Dr. E. L. Creveling, vice-president; Dr. Thomas W. Bath, secretary-treasurer.

A brief report of the financial condition of the society, with a résumé of the active work and splendid coöperation of the members was given by the secretary.

The meeting adjourned, with happy felicitations and expressions of a most cordial professional feeling.

THOMAS W. BATH, *Secretary*.



## UTAH STATE MEDICAL ASSOCIATION

H. P. KIRTLEY, Salt Lake City.....President  
 WILLIAM L. RICH, Salt Lake City.....President-Elect  
 M. M. CRITCHLOW, Salt Lake City.....Secretary  
 J. U. GIESY, 701 Medical Arts Building,  
 Salt Lake City.....Associate Editor for Utah

### COMPONENT COUNTY SOCIETIES

#### SALT LAKE COUNTY

The regular meeting of the Salt Lake County Medical Society was held at the Newhouse Hotel, Salt Lake City, Monday, November 25, at 8 p. m.

The meeting was called to order at 8:03 o'clock by President C. M. Benedict. Forty-five members and six visitors were present.

The minutes of the previous two meetings were read and accepted without correction.

The following clinical program was presented by the members of the medical department of the University of Utah, under the supervision of B. I. Burns:

Experiments with the Female Sex Hormone—G. C. Arvin.

The Nervous Mechanism of Angina Pectoris—Donald Duncan.

Report on Parathormone in Menstrual Bleeding—H. C. Goldthorpe.

Effect of Hormones on the Sympathetic Nervous System—R. M. Tandowsky.

Pathological Embryology—Orin Ogilvie.

Bovine Skin Tuberculosis—L. L. Daines.

\* \* \*

The following resolution of regret was presented by the Necrology Committee, J. U. Giesy, chairman:

In Memoriam—George L. Smart

Whereas, Our fellow member, Dr. George L. Smart, has been called upon to answer that summons to which we, one and all, must in due course respond; and

Whereas, We his comrades shall miss him from our ranks with feelings of deep regret; therefore be it

Resolved, That we of the Salt Lake County Medical Society take this means of formally expressing our sympathy to his relatives in their bereavement, so necessarily coupled with our own sense of loss; that a copy of this resolution be spread upon the minutes of our organization, and a copy sent to the immediate family of the deceased.

\* \* \*

The following report of the board of censors upon the letter of B. I. Burns, regarding forming an associate membership for members of the medical department of the University of Utah who are not physicians, was read by William F. Beer:

"The committee unanimously recommends that the society change the constitution and by-laws so that members of the medical department of the University of Utah who are not physicians may be accepted as associate members by the Salt Lake County Medical Society."

E. F. Root moved that the report be accepted. Seconded and carried.

S. G. Kahn moved that the board of censors be asked to frame a change in the Constitution and By-Laws of the Salt Lake County Medical Society to show that an associate membership is permissible. Seconded and carried.

A communication from the Salt Lake County Commissioners was read asking that the society members examine old-age pension applicants free of charge. L. J. Paul moved that the secretary instruct the Salt

Lake County Commissioners that it has always been the policy of the society to render aid in any worthwhile charitable cause, and that it would do so in the present instance. Seconded and carried.

The applications for membership of E. F. Wight and F. W. Schaffer were read. T. A. Clawson, Jr., a transfer from the Olmstead County Medical Society, and George W. Buchanan were unanimously elected members of the society.

The meeting was adjourned at 10:15 o'clock.

\* \* \*

The regular semiannual business meeting of the Salt Lake County Medical Society was held at the Newhouse Hotel, Salt Lake City, Monday, December 9, at 8 p. m.

The meeting was called to order at 8:05 o'clock by President C. M. Benedict. Eighty members were present.

The minutes of the previous meeting were read and accepted without correction.

G. H. Pace spoke briefly about the need of a psychopathic ward in the County Hospital, and stated that the county commissioners were willing to create such a department if the medical profession so desired. M. M. Nielson moved that the society go on record as being in favor of the psychopathic ward to be built at the Salt Lake County Hospital, and suggested that the county commissioners be notified to this effect.

G. G. Richards read a communication from President Thayer of the American Medical Association regarding a memorial to Professor Widal. B. Rees suggested that this should be an individual contribution, and F. Stauffer moved that the chair appoint a committee of three to solicit funds for the Widal Memorial, with G. Richards as chairman. Seconded and carried. The following committee was appointed by President Benedict: G. Richards, chairman; W. R. Tyndale and W. G. Schulte.

B. E. Bonar read the secretary's report. W. F. Beer moved that the report be accepted and filed. Motion seconded and carried.

Clark Young read the report of the treasurer. W. H. Rothwell moved that the report be accepted and filed. Seconded and carried.

C. M. Benedict reported for the Program Committee. F. M. McHugh moved that the report be accepted and filed. Motion seconded and carried.

A. C. Callister gave a verbal report for the Committee on Public Health and Legislation. W. F. Beer moved that the report be accepted. Seconded and carried.

J. C. Landenberger read a report of the Medico-Legal Committee. This was discussed by J. Z. Brown and P. G. Snow. G. H. Pace moved that the report be accepted and filed. Motion seconded and carried.

W. R. Tyndale read the report of the Library Committee, and stated that henceforth none except physicians would be allowed the privilege of the stacks. This report was discussed by B. I. Burns and W. T. Ward. G. Richards moved that the report be accepted and filed.

W. R. Tyndale moved that W. T. Cannon be given a vote of thanks for the donation of his medical library to the Salt Lake County Medical Library, and that a letter of thanks be sent to him by the secretary. Seconded and carried.

Sol G. Kahn read the report of the Committee on Reduction of Medical Meetings. The committee recommended that the regular monthly clinical meetings at the various hospitals be discontinued, and that the Salt Lake County Medical Society substitute two yearly clinical meetings at each hospital in their place. F. M. McHugh moved the adoption of this report. Seconded and carried.

J. P. Kerby reported for the Fee Schedule Committee. This committee reiterated the recommenda-



tions of its last report, and recommended that persistent failure to follow the fee schedule be regarded as grounds for loss of membership; and finally recommended that some action be taken by the society to carry out these recommendations, or that the committee be discharged and their function discontinued. This was discussed by G. G. Richards, F. Stauffer, G. H. Pace, J. E. Jack, L. N. Ossman, A. C. Callister, and W. F. Beer. W. R. Tyndale moved that this committee present to the society a new fee schedule for adoption. J. P. Kerby amended this motion to the effect that a special meeting of the society be called to consider the new fee schedule. This amendment was accepted by W. R. Tyndale, and the motion and amendment were seconded and carried.

F. H. Raley, chairman of the board of censors, presented a revision of the Constitution and By-Laws regarding the formation of an associate membership. This report was discussed by G. G. Richards, F. Stauffer, F. H. Raley, W. F. Beer, H. P. Kirtley, B. I. Burns, and J. Z. Brown.

L. J. Paul read the report of the Boy Scouts Committee. W. Rich moved that the report be accepted and filed.

The report of the Necrology Committee, J. W. Giesy, chairman, was read by the secretary. G. H. Pace moved that the report be accepted and filed.

D. G. Edmunds read the report of the Committee on Irregular Practices. Sol G. Kahn moved that the report be accepted and filed, and that the committee be continued for next year. Seconded and carried.

J. C. Landenberger read the report of the Special Committee to Investigate the new policy of the United States Fidelity and Guaranty Company. The committee recommended the adoption of the new policy by those members who wish to insure themselves with this company. This report, however, was not meant to recommend that the policy of this company was preferable to the policy of any other company. This was discussed by Sol G. Kahn, A. C. Callister, and G. A. Cochran. W. R. Tyndale moved that the report be accepted and filed. Seconded and carried.

Earl F. Wight was elected to membership by sixty-one yeas, and one no.

The society then proceeded to elect officers for the coming year. Sol G. Kahn nominated M. M. Nielson for president. W. F. Beer moved that the nomination be made unanimous, and that the secretary be instructed to cast the ballot. Seconded and carried. W. F. Beer nominated F. M. McHugh for vice-president and J. Z. Brown nominated R. Groesbeck for vice-president. L. N. Ossman moved that the nomination be closed. Seconded and carried. F. M. McHugh was voted vice-president by a vote of 44 to 30. J. Z. Brown moved that the election of F. M. McHugh be made unanimous. Seconded and carried. A. C. Callister moved that B. E. Bonar be elected secretary by acclamation. Seconded and carried. W. F. Beer moved that Clark Young be elected treasurer by acclamation. Seconded and carried.

W. G. Schulte moved that the tradition of electing the retiring president a member of the board of censors be continued, and that the secretary be instructed to cast a unanimous ballot for C. M. Benedict. Seconded and carried.

President C. M. Benedict gave his address as retiring president. He mentioned that his mother, in the early eighties, gave a dinner to a group of Salt Lake City physicians, and this group later formed the nucleus for the Salt Lake County Medical Society. He stated that it had been a great honor to him to be president of the society with which his family had been so intimately associated. President C. M. Benedict asked Spencer Wright and W. G. Schulte to escort the incoming president, M. M. Nielson, to the chair. M. M. Nielson made a few remarks.

W. R. Tyndale moved that the society extend a vote of thanks to the passing officers for their year's work. Seconded and carried.

Clark Young announced that the dues for 1930 were payable now, and that the usual fine would be instituted for those whose dues were not received by February 1.

The meeting adjourned at 10:05 o'clock.

BARNET E. BONAR, *Secretary*.



#### UTAH COUNTY

The Utah County Medical Society met October 23. The principal paper of the evening was by Doctor Curtis, of Salt Lake City, on "General Aspects of Psychiatry of Interest to the General Practitioner." Following this paper, Doctor Ossman of Salt Lake gave an interesting talk on "A Newer Conception of the Treatment of Osteomyelitis."

The meeting of November 20 was marked by a paper on "X-ray Diagnosis of Right-Sided Enteropneumosis," with x-ray illustrations, by Dr. Robert Tyndale of Salt Lake. Dr. George E. Bryan of Hollywood, California, was present at this meeting as a guest.

The Utah County Dental Society invited the members of the Utah County Medical Society to meet with them jointly on November 25. At this time, Doctor Wherry of Salt Lake spoke on "Mouth Infections." Doctor Bergstrom of Salt Lake discussed the same topic, and the president-elect of the Utah Dental Society gave a short talk on "A Plea for Better Cooperation between the Physician and Dentist."

Dr. A. E. Robison has recently returned from Chicago where he has been pursuing postgraduate work, with especial attention to physical therapy. He attended the annual convention of the American College of Physical Therapy while in the East.

Dr. Walter Hastler has recently returned from The Mayo Clinic where he has been for some time, both as a patient and a student.

J. L. AIRD, *Secretary*.



#### WEBER COUNTY

The meeting of the Weber County Medical Society was held November 22 at the Hotel Bigelow, President A. H. Aland presiding.

Election of officers of the medical society for 1930 follows: Henry W. Nelson, president; W. H. Budge, vice-president; Conrad Jensen, secretary; S. W. Badcon, treasurer.

The society has an excess of funds in the bank, and Dr. E. R. Dumke moved that the fund be left in the bank at 4 per cent interest. This was seconded by Dr. L. S. Merrill and passed.

The paper for the evening was given by Dr. Conrad Jensen on "Postgraduate Work in Europe." This paper was very interesting. Discussion was opened by Doctors E. C. Rich, L. R. Jenkins, and A. H. Aland.

The meeting adjourned.

GEORGE M. FISTER, *Secretary*.

#### UTAH NEWS

The regular meetings of the Academy of Medicine were resumed the evening of December 5, after having been suspended during the last week of November.

The program given the first meeting of December is as follows: Coronary Occlusion (slides), Dr. Van Scoyoc; Personal Experiences with Amytal and Spinal Anesthesia, Dr. H. T. Anderson; Presentation of Chest Case (with pictures), Dr. Jellison.

\* \* \*

The regular meeting of the Holy Cross Hospital Clinical Association was held the evening of November 18, in the lecture room of the hospital. The following program was presented: A "Nephroma" 1-B Carcinoma of the Prostate with Metastasis to Pelvic Bones, Dr. W. G. Schulte; Severe Burn of Hand, Dr. Sol G. Kahn; Suppurative Arthritis of Knee, Dr. John Sugden; and Encephalitis, Drs. B. E. Bonar and D. E. Hansen.



## MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: Comment on Current and Recent Articles in the Journal; News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

### NEWS

**Western Surgical Association.**—At the thirty-ninth annual meeting of the Western Surgical Association, held at Del Monte December 12, 13 and 14, 1929, Dr. Carl E. Black of Jacksonville, Illinois, was elected president; Dr. Frank R. Teachenor, secretary; and Dr. Thomas G. Orr of Kansas City, Missouri, treasurer.

The next meeting of the association will be held at Kansas City, December 11, 12 and 13, 1930.

**The Increase in Subscription.**—At its recent meeting, the board of trustees of the American Medical Association voted to increase the price of the journal, including fellowship dues, to \$7. The action was taken in accordance with authorization by the House of Delegates at the annual session in Portland. The advisability of the increase should be apparent to all subscribers and to Fellows of the Association. The expansion of the work of the association, and particularly the extension of service rendered to Fellows and subscribers during the last ten years, is widely recognized. The publication of the special periodicals and of the *Quarterly Cumulative Index Medicus* are drains on the finances of the association well worth while for the advancement of medical science. The special committees making grants for scientific research and therapeutic research, the Councils on Medical Education, on Pharmacy and Chemistry, on Physical Therapy and on Scientific Assembly function for the good of medicine and for the public health without asking any financial return from the medical profession or the public. The Bureaus of Health and Public Instruction, of Investigation and of Legal Medicine and Legislation answer thousands of questions from physicians and from the public and represent medicine in many phases of professional and public life. The package library and the reference and periodical lending services aid physicians everywhere, but particularly in smaller communities, to keep abreast of scientific progress. Indeed, space is not available to enumerate all of the various activities and plans, which are, no doubt, well known to those who have followed carefully the annual reports of the board of trustees. Even if it were not for all these projects, the price of subscription to the journal is still comparatively far below the subscription prices of other similar periodicals published both in this country and abroad. *The Journal of the American Medical Association* supplies some four thousand reading pages annually, as compared with from 1152 to 2736 reading pages supplied by leading weekly medical publications in other countries. The new subscription price of \$7 may be compared with prices varying from \$10 to \$17 charged by similar publications abroad. The plans of the board of trustees contemplate new buildings, a national scientific exhibit, extension of library and bibliographic services, and a wider extension of the help that the association can render to the individual practitioner.

**Warning to Physicians.**—Recently there has been active among physicians in New York and Boston an impostor who on two occasions has represented himself to be the son of Dr. Otis B. Wight of Portland, Oregon. The impostor is about five feet eight inches in height, with dark hair, and with eyes so dark that, except in a good light, his pupils cannot be distinguished. His face is rather long and narrow with well developed nose and chin, lips slightly full,

skin pale and fairly clear; well dressed, wearing a fraternity pin prominently (not identified, but claimed by the wearer to be Sigma Chi), pleasant manners and address. When last seen he had on a light gray felt hat, light brownish gray topcoat, dark blue suit, tan shoes, and rubbers. He claimed to have been at Johns Hopkins Medical School two years and to be now at Western Reserve University in the fourth year of medical school. His name and story will probably be different when next heard from, but a description of him has been given to the Boston police department. Doctor Wight is interested in his identification.

**University of California Medical School.**—The University of California Medical School announces the organization of new activities in the field of medical history and bibliography, which includes instruction and research in these subjects and supervision of the development of the Medical School library.

Dr. LeRoy Crummer has accepted an appointment as clinical professor of medical history and bibliography, effective January 1, 1930, and Dr. Sanford Larkey is to be assistant professor of medical history and bibliography, effective July 1, 1930.

**The New Shrine.**—The hope for a miracle—a doubting faith in miracles—is eternal in the human mind. Born into suffering as the sparks fly upward man is ever in search of the short cut that will relieve him of his pain and release him forever from the necessity of patience in working out his destiny. It is inborn in us, this desire to cut at one stroke the Gordian knot, to throw off our mortal burdens and to stand forth free.

Miracles furnish the glamor of the Testaments, and the lapse of nineteen hundred years has rid us of the necessity of trying to interpret them on a rational basis. So many centuries are piled up upon them that it is futile for us to try and apply to them the measure of scientific accuracy.

New miracles have been quoted and new shrines have been established, however, through all the ages. We now, in this mechanical age, have before us the spectacle of hundreds of thousands of afflicted believers—and of idle curiosity seekers—flocking to the near-by grave of a youthful priest who died almost sixty years ago.

Modern miracles of healing generally resolve themselves into two classes—the healing of those who had only an imaginary disease to begin with, and the imaginary cure of those afflicted with organic disease. The permanency of either of these cures may be speculated on; presumably the first may occasionally be of lasting value, although one is reminded of Billy Sunday's reference to the bath—its value is not wholly destroyed by the fact that it needs an occasional repetition.

Will the grave of this holy youth become a shrine which will permanently grip the imagination of the emotional masses and stimulate their belief for years to come? Will he become another St. Ann de Beaupré? This we cannot answer except to say that the emotional masses are fickle, and that today, as little as at any time, are we building on permanent foundations.

The amazing thing is to realize what a little distance the human mind has traveled since the mysticism of the Middle Ages; what a short step it is back to the days of Salem witchcraft. One can almost believe that the terror of that period might be repeated today.—*The New England Journal of Medicine*, November 1929.



## MEDICAL ECONOMICS

**The Physician's Income Tax—1929.**—The taxpayer who is required to make a return must do so on or before March 15, unless an extension of time for filing the return has been granted. For cause shown, the collector of internal revenue for the district in which the taxpayer files his return may grant such an extension, on application filed with him by the taxpayer. This application must contain a full recital of the causes for the delay. Failure to make a return may subject the taxpayer to a penalty of 25 per cent of the amount of the tax due.

The normal rate of tax on individual citizens or residents of the United States, under the Revenue Act of 1928, is 1.5 per cent on the first \$4000 of net income in excess of the exemptions and credits, 3 per cent on the next \$4000, and 5 per cent on the remainder.

### WHO MUST FILE RETURNS

1. Returns must be filed by every person having a gross income of \$5000 or more, regardless of the amount of his net income or his marital status. If the aggregate gross income of husband and wife, living together, was \$5000 or more, they must file a joint return or separate returns, regardless of the amounts of their joint or individual net incomes.

2. If gross income was less than \$5000, returns must be filed (a) by every unmarried person, and by every person married but not living with husband or wife, whose net income was \$1500 or more, and (b) by every married person, living with husband or wife, whose net income was \$3,500 or more. If the aggregate net income of husband and wife, living together, was \$3500 or more, each may make a return or both unite in a joint return.

If the marital status of a taxpayer changed during the tax year, the amount of income necessary to bring him within the class required to make returns should be ascertained by inquiry of the local collector of internal revenue.

As a matter of courtesy only, blanks for returns are sent to taxpayers by the collectors of internal revenue, without request. Failure to receive a blank does not excuse anyone from making a return; the taxpayer should obtain one from the local collector of internal revenue.

The following discussion covers matters relating specifically to the physician. Full information concerning questions of general interest may be obtained from the official return blank or from the collectors of internal revenue.

### GROSS AND NET INCOMES—WHAT THEY ARE

**Gross Income.**—A physician's gross income is the total amount of money received by him during the year from professional work, regardless of the time when the services were rendered for which the money was paid, plus such money as he has received as profits from investments and speculation, and as compensation and profits from other sources.

**Net Income.**—Certain professional expenses and the expenses of carrying on any enterprise in which the physician may be engaged for gain may be subtracted as "deductions" from the gross income, to determine the net income on which the tax is to be paid. An "exemption" is allowed, the amount depending on the taxpayer's marital status during the tax year, as stated before. These matters are fully covered in the instructions on the tax return blanks.

**Earned Income.**—In view of the credit of 25 per cent allowed on earned net income, the physician should state accurately the amount of such income as distinguished from his receipts from other sources. Earned income means professional fees, salaries and wages received as compensation for personal services rendered. From this, in the computation of the tax, must be subtracted certain "earned income deductions." The difference is the "earned net income."

The first \$5000 of an individual's net income from all sources may be claimed, without proof, to be earned net income, whether it was or was not in fact earned within the meaning set forth in the preceding paragraph. Net income in excess of \$5000 may be claimed as earned if it in fact comes within that category. However, a taxpayer may not claim, as earned, net income in excess of \$30,000.

The conditions relating to the computation of the tax on earned income are too elaborate to be stated here. In case of doubt, physicians should consult collectors of internal revenue.

### DEDUCTIONS FOR PROFESSIONAL EXPENSES

A physician is entitled to deduct all current expenses necessary in carrying on his practice. The following statement shows what such deductible expenses are and how they are to be computed:

**Office Rent.**—Office rent is deductible. If a physician rents an office for professional purposes alone, the entire rent may be deducted. If he rents a building or apartment for use as a residence as well as for office purposes, he may deduct a part of the rental fairly proportionate to the amount of space used for professional purposes. If the physician occasionally sees a patient in his dwelling house or apartment, he may not, however, deduct any part of the rent of such house or apartment as professional expense; to entitle him to such a deduction he must have an office there, with regular office hours. If a physician owns the building in which his office is located, he cannot charge himself with "rent" and deduct the amount so charged.

**Office Maintenance.**—Expenditures for office maintenance, as for heating, lighting, telephone service and the services of attendants are deductible.

**Supplies.**—Payments for supplies for professional use are deductible. Supplies may be fairly described as articles consumed in the using; for instance, dressings, clinical thermometers, drugs and chemicals. Professional journals may be classified as supplies, and the subscription price deducted. Amounts currently expended for books, furniture and professional instruments and equipment, "the useful life of which is short," may be deducted; but if such articles have a more or less permanent value, their purchase price is a capital expenditure and is not deductible.

**Equipment.**—Equipment comprises property of more or less permanent value. It may ultimately be used up, deteriorate or become obsolete, but it is not in the ordinary sense of the word "consumed in the using"; rather, it wears out.

Payments for equipment or nonexpendable property for professional use cannot be deducted. As property of this class may be named automobiles, office furniture, medical, surgical and laboratory equipment of permanent value, and instruments and appliances constituting a part of the physician's professional outfit and to be used over a considerable period of time. Books of more or less permanent value are regarded as equipment, and the purchase price is therefore not deductible.

Although payments for equipment or nonexpendable articles cannot be deducted, yet from year to year there may be charged off against them reasonable amounts as depreciation. The amounts so charged off should be sufficient only to cover the lessened value of such property through obsolescence, ordinary year and tear, or accidental injury. If improvement to offset obsolescence and wear and tear or injury has been made, and deduction for the cost claimed elsewhere in the return, claim should not be made for depreciation.

A hard and fast rule cannot be laid down as to the amount deductible each year as depreciation. Everything depends on the nature and extent of the property and on the use to which it is put. Five per cent a year has been suggested as a fair amount for depreciation on an ordinary medical library. Depreciation on an automobile would obviously be much greater. The proper allowance for depreciation of any property is that amount which should be set aside for the tax year in accordance with a reasonably con-



sistent plan, not necessarily at a uniform rate, whereby the aggregate of the amounts so set aside, plus the salvage value, will at the end of the useful life of the property in the business equal the purchase price of the property or, if purchased before March 1913, its estimated value as of that date or its original cost, whichever may be the greater. The physician must in good faith use his best judgment and make such allowance for depreciation as the facts justify. Physicians who, from year to year, claim deductions for depreciation on nonexpendable property will do well to make annual inventories, as of January 1, each year.

**Medical Dues.**—Dues paid to societies of a strictly professional character are deductible. Dues paid to social organizations, even though their membership is limited to physicians, are personal expenses and not deductible.

**Postgraduate Study.**—The Commissioner of Internal Revenue holds that the expense of postgraduate study is not deductible.

**Traveling Expenses.**—Traveling expenses necessary for professional visits to patients are deductible. The board of tax appeals has held that traveling expenses incurred in attending medical meetings are deductible (Cecil M. Jack v. Commissioner, 13 B. T. A. 726; J. Bentley Squier, 13 B. T. A. 1223). Such expenses include only those necessarily incurred in attendance at a professional meeting for a professional purpose. The taxpayer is advised to make no claim for the deduction of such expenses unless he is prepared to establish the fact of expenditure. In the future accurate itemized records should be kept of such expenses and substantiating evidence, such as Pullman and railroad receipts, hotel bills and so on, should be carefully preserved.

#### AUTOMOBILES

Payment for an automobile is a payment for permanent equipment, and is not deductible. The cost of operation and repair, and loss through depreciation, are deductible. The cost of operation and repair includes the cost of gasoline, oil, tires, insurance, repairs, garage rental (when the garage is not owned by the physician), chauffeurs' wages, etc.

Deductible loss through depreciation is the actual diminution in value resulting from obsolescence and use, and from accidental injury against which the physician is not insured. If depreciation is computed on the basis of the average loss during a series of years, the series must extend over the entire estimated life of the car, not merely over the period in which the car is in the possession of the present taxpayer.

If the automobile is used for professional and also for personal purposes—as when used by the physician for recreation, or used by his family—only so much of the expense as arises out of the use for professional purposes may be deducted. A physician doing an exclusive office practice and using his car merely to go to and from his office cannot deduct depreciation or operating expenses; he is regarded as using his car for his personal convenience and not as a means of gaining a livelihood.

What has been said with respect to automobiles applies with equal force to horses and vehicles and the equipment incident to their use.

#### MISCELLANEOUS

**Laboratory Expenses.**—The deductibility of the expenses of establishing and maintaining laboratories is determined by the same principles that determine the deductibility of other corresponding professional expenses. Laboratory rental and the expenses of laboratory equipment and supplies and of laboratory assistants are deductible when under corresponding circumstances they would be deductible if they related to a physician's office.

**Losses by Fire, etc.**—Loss of and damage to a physician's equipment by fire, theft or other cause, not

compensated by insurance or otherwise recoverable, may be computed as a business expense, and is deductible, provided evidence of such loss or damage can be produced. Such loss or damage is deductible, however, only to the extent it has not been made good by repair and the cost of repair claimed as a deduction.

**Insurance Premiums.**—Premiums paid for insurance against professional losses are deductible. This includes insurance against damages for alleged malpractice, against liability for injuries by a physician's automobile while in use for professional purposes, and against loss from theft of professional equipment, and damage to or loss of professional equipment by fire or otherwise. Under professional equipment is to be included any automobile belonging to the physician and used for strictly professional purposes.

**Expense in Defending Malpractice Suits.**—Expenses incurred in the defense of a suit for malpractice are deductible as business expense. Expenses incurred in the defense of a criminal action, however, are not deductible.

**Sale of Spectacles.**—Oculists who furnish spectacles, etc., may charge as income money received from such sales and deduct as an expense the cost of the article sold. Entries on the physician's account books should in such cases show charges for services separate and apart from charges for spectacles, etc.—*Jour. A. M. A.*, January 5, 1929.

## CORRESPONDENCE \*

Subject of Following Letter: "Mrs. Eddy, The Biography of a Virginal Mind"

Los Angeles,

December 20, 1929.

To the Editors,

California and Western Medicine:

The following advertisement appeared as a display advertisement in the Los Angeles *Times* of recent date:

"We have been forced to take off our tables all copies of 'Mrs. Eddy' by Edwin Franden Dakin."

This is from a bookseller who writes also that, because of pressure from individuals who are trying to smother this biography, he has been obliged to return his stock of copies and compelled to write a letter of apology to "two agencies" in his city. Personally this bookseller endorses the book.

This is a sample of many similar letters which come to us from coast to coast. The result is a situation almost incredible in a free country. . . .

Throughout almost eighty-five years of publishing, we have been able to say of our books, "On sale at all book stores." We regret that in this one case, we must qualify this statement.

If you can't get a copy of "Mrs. Eddy: The Biography of a Virginal Mind," from any available bookseller, we will mail you a copy postpaid to any part of the United States on receipt of \$5.

Charles Scribner's Sons,  
597 Fifth Avenue, New York City.

The undersigned had read this book and had found it to be even kinder to the memory of the late, lamented Mrs. Mary Baker Glover Patterson Eddy and the Christian Science Church than have been Georgine Milmine or Peabody or others who have dissected this life and organization, and therefore he was astonished to know that the central organization

\* California and Western Medicine in printing letters in the Correspondence column does so without committing the California Medical Association or the journal to any issues that are discussed, and prints such communications without prejudice.



of the higher powers of the Christian Science Church was attempting to suppress free speech, free reading, and free thought in Los Angeles, and presumably in other cities of California and of the United States.

Inquiry by him elicited the fact that booksellers in Los Angeles had been requested, and either by direction, or innuendo, had been threatened or urged to suppress the sale of this book.

The writer was informed that C. C. Parker, 520 West Sixth Street, was the only bookseller in the city who had continued a window display in defiance of the demands of the Christian Scientists. The writer was also informed that a window display made by the book department of Bullock's was removed within three hours of its opening by reason of a storm of protests from followers of Mrs. Mary B. G. P. Eddy.

This was so interesting that visits were made to a number of stores to ascertain the facts. At the book department of the Broadway Department Store the book was on sale and in evidence. At Bullock's the writer purchased a copy, but it was under the counter. At the Jones book store, 426 West Sixth Street, it had been on sale, but there were none in stock. The assistant manager stated that there had been much controversy about the book, and he did not know what the policy of the firm would be. The writer's card was left, with a request for information. None came. A visit to this store on December 10 elicited the fact that there were none in stock, but that it could be ordered.

At Parker's, 520 West Sixth Street, the book was on display, in stock, and more coming. The manager of the book department of the J. W. Robinson department store stated that the book was not on sale, would not be on sale and could not be ordered through this firm. An hour later the writer was informed over the phone by Mr. Rhodes, secretary of the firm, who was present during my conversation with the manager of the book department, that they would take an order for the book.

On December 11 my wife called at the May department store book department and was curtly told that they did not sell the book, would not sell the book by order or otherwise.

Fowler Brothers book store, 747 South Broadway, have the book on display and have sold it from the start.

The feature of this affair that is most interesting to the writer is that the subtle influence of the Christian Science committee can in a large measure throttle the speech, the reading, the thought of a million and a half of Los Angeles people who are in no way in sympathy with them. There are some thirty Christian Science churches in Los Angeles. It is not probable that their average membership is five hundred, and I am informed by a former Christian Scientist that it is less than three hundred. No doubt there are hundreds of thousands of Catholics, Jews, and Protestants who would like to know this story. Why not let them have it?

The book itself has received the highest praise as a work of real unbiased biography by the best reviewers in the country, such as the *New York World*, *Springfield Republican*, *Saturday Review*, *The Nation*, *Boston Herald*, *The Carnegie Library Magazine*—the unmuzzled press.

The medical profession does not wish to interfere with Christian Scientists in their religion or in the care of their own personal bodies. It should be vitally concerned, however, when the Christian Science organization or any other organization attempts to interfere with the sanitary or health control of the community as such, or when it attempts to interfere with the free speech, free thought, or free reading of the people of a country such as the United States of America.

WILLIAM DUFFIELD, M. D.

## TWENTY-FIVE YEARS AGO\*

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. III, No. 1, January 1905

*From some editorial notes:*

. . . *Another New Year.*—The *Journal* enters upon its third year of life with hope and confidence and is cheerful of the future. We speak of it in this personal sense for, to your Publication Committee, the *Journal* seems a living, growing entity; our child. The condition of the society is excellent; county societies, almost without exception, are in a flourishing condition and are growing at a healthy rate. A number of counties where no societies now exist are ready for organization. On every important question confronting the medical profession of California there is harmonious agreement. Judging from the kindly expressions of opinion that come to us from every county society and from individuals in all parts of the country, the *Journal's* policy in regard to not only a passive but an active part in the fight for clean advertising, is heartily approved. . . .

. . . *Tuberculosis Sanatoria.*—A question which should receive the careful consideration of all members of the society, and their thoughtful expression, is the proposed establishment of state sanatoria for the tuberculous poor. . . .

. . . What direction shall state or municipal aid take? Shall it be out-patient dispensaries, or shall it be sanatoria, or both? Judging from the general tone of discussion, not only here in California but in other parts of the United States, both projects are considered desirable and necessary. . . .

. . . *Just Keep Hammering.*—During the past few months the *Journal* has devoted considerable space to editorial discussion of the advertising question and to occasional criticism of the American Medical Association, or rather of its trustees, in connection with that important subject. It is possible that at times this may be a little monotonous to some of our readers; at times it is somewhat tiresome even to the Publication Committee. But we must crave your indulgence yet a little while. An official of the American Medical Association, who has gone over the ground very carefully, said to a member of the committee: "You are unquestionably right, and you are doing the only thing that can possibly bring results; you are constantly hammering. Keep it up, for if you stop and the subject is dropped, it will sink into oblivion. Keep hammering and you will see that the question will have to be taken up and settled right." For that reason we shall "keep hammering." . . .

. . . *The Pity of It All.*—Contrast the downright honesty of the Japanese commissariat, the fine wool blankets combining warmth with lightness; the lamb's wool toe socks for extreme cold weather; the beautifully woven underwear; the rice and other foodstuffs, of which only the best is accepted: compare these with our own embalmed beef, our actually rotten and rotting tinned pork and beans, our poor shoddy cloth, our glove scandal, the thousand and one instances of "graft, graft, graft." The existence of surprise is indicative of a widespread demoralization that is appalling in its tragic significance. So accustomed are we to corruption that simple honesty excites our surprise; graft we look upon as naturally to be expected. . . .

. . . *Registration of Nurses.*—The California State Nurses' Association has had prepared a bill which is to be introduced in the legislature providing for registration of graduate and qualified nurses. The text of the bill has been submitted to a number of attorneys and prominent physicians and has received their approval. . . .

\* This column aims to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.



*From an article entitled "My Son, Make Money; Honestly, If You Can, But—Make Money":*

... Let us once more glance at the financial statement made by the trustees of the American Medical Association at the last meeting and see whether further understanding may have come from reflection. . . .

... It is difficult to see, from the figures which the trustees give, why it would not be possible for them to conduct *The Journal of the American Medical Association* in accordance with the Principles of Ethics, do all the work the association is now doing, and still make money. And the dollars thus made would be good, clean, wholesome dollars, without taint or stench. It is true that the reserve fund would grow the more slowly, but it would grow, and in the end be a monument to good business sense as well as to good ethics, instead of being an apparent illustration that the accumulation of wealth will counterbalance disregard of ethical principles. . . .

*From an article on "Second and Fourth Positions of the Vertex" by Henry Gibbons, Jr., M. D., San Francisco:*

I have long been impressed with the want of agreement of the textbooks on obstetrics in regard to the occurrence and the frequency of second and fourth positions of the vertex. Until recently little more than the possibility of the occurrence of the left occipitoposterior position has been admitted. . . .

*From an article on "Appendicitis—Some Points in Its Diagnoses and Treatment from the Viewpoint That Its Cause Is a Strangulation Produced by Distention Behind a Ball-Valve" by C. Van Zwalenburg, M. D., Riverside:*

I wish to acknowledge my indebtedness to Doctors Black and Leonard of the Hendryx Laboratory of the College of Medicine of the University of Southern California, by whose courtesy that institution was used for most of the work. The specimens of inflamed appendices of dogs are the result of some experiments undertaken to demonstrate that strangulation from overdilatation of the appendix will produce appendicitis. . . .

*From an article on "Chronic Otorrhea as Viewed by the Life Insurance Companies and the Medical Recruiting Officer" by A. Barkan, M. D., San Francisco:*

Motto: As long as a discharge from the ear exists, we are never able to say how, when or where it may end, nor to what it may lead.—Wilde.

The running ear, having been considered harmless, nay, a benefit to the general economy of the body, by many from time immemorial, has ceased to be a *noli me tangere*. The last twenty years have brought about a change so radical in the understanding of this malady that radical operative measures have been adopted to fight it. . . .

*From a letter on the subject of "Wood-Alcohol Poisoning:*

To the Editor of the State Journal: A few days since, by presenting to the San Francisco County Medical Society a case of wood-alcohol poisoning, I have tried to draw local attention to a matter of public moment, as evinced by the attitude of the American Medical Association regarding the same, and the publicity it has received more recently still in the daily press on the occasion of the deaths of several persons in New York from the same poison. . . .

*From medical society reports:*

*Association of South Side Physicians.*

The Association of South Side Physicians held its regular bimonthly meeting Friday evening, October 28, at Dr. W. F. Barbat's office, 1310 Folsom Street, with the president, Dr. A. Eichler, in the chair. . . .

... Dr. A. B. Spalding, who had been invited to attend the meeting, explained the purposes and methods of conducting the San Francisco Maternity Hospital at 1217 Harrison Street, as there had been some misapprehension of the objects of the institution. . . .

## DEPARTMENT OF PUBLIC HEALTH

*By W. M. DICKIE, Director*

**Epidemic Meningitis.**—The incidence curve of epidemic meningitis in California by years and months from 1920 to the end of July 1929, shows that there was relatively a high incidence of the disease in 1920 and 1921, but thereafter, for a period of four years, there were few cases and few deaths. In December 1925, there was a definite rise in incidence which marked the beginning of a series of three annual peaks which occurred in the winter and spring months of 1926, 1927, and 1928. The peak of 1928 was lower than those of 1926 and 1927, and during the late summer and autumn months of 1928 the incidence curve appeared to be approaching the normal level of 1922-1925. However, in November 1928, the case incidence began to increase and continued to rise rapidly, month by month, until the peak of 112 cases was reached in March 1929. A high incidence was maintained during April and May, but in June and July the number of new cases had dropped to about one-half, although this still was relatively a high case incidence. There has been a further decline during the past few weeks, but, bearing in mind that the normal seasonal incidence is greater in the winter and spring months, one can but speculate whether we have passed through the worst of this epidemic or whether there is more to follow.

An interesting, though not surprising fact is that, coincident with the marked increase in the number of cases, there has been an increase in the case mortality rate. From 1922 to 1925, inclusive, the case mortality rate was 36.6 per cent; in 1928 it was 44.4 per cent; and during the first six months of 1929 it was 50.8 per cent. The number of reported cases during this six-month period was 521, and the number of deaths was 265.

An editorial in *The Journal of the American Medical Association* of June 15, 1929, might lead one to believe that the epidemic meningitis situation on the Pacific Coast was particularly alarming, but no such conclusion is justifiable. This has been a meningitis year, not only in the West but elsewhere in the United States, and the situation has been sufficiently acute to justify monthly bulletins in the public health reports. On January 11 it was reported that, although the incidence of epidemic meningitis in the United States had been unusually low during the first week in November 1928, a sharp rise became apparent during the remainder of the month and that during the three weeks ending December 1, 258 cases had been reported as compared with 139 cases during the corresponding period of 1927. On February 1 it was reported that there was an increase during December in nearly all the states, and on March 1 it was stated that in January 1929, the incidence of the disease in the United States was the highest since 1918, with a general tendency toward an increase in all sections of the country. Finally, on July 5, 1929, McCoy reported that one must go back to 1905 to find the last comparable prevalence of the disease, and it is an interesting fact that the beginning of the epidemic was at approximately the same time in all sections of the country.—Ernest C. Dickson, M. D., Department of Public Health and Preventive Medicine, Stanford University Medical School.

**Examine Thirteen Thousand Children of Preschool Age.**—Nearly thirteen thousand California children, who entered school for the first time this fall, were given physical examinations by the Bureau of Child Hygiene of the State Department of Public Health,



in coöperation with the California Congress of Parents and Teachers. Most of these children live in the rural districts of the state, where organized facilities for child care are not available. Forty-eight counties of the state were covered in the campaign. Examinations were conducted by competent physicians, many of whom donated their services. The examining physicians noted the condition of the heart, lungs, eyes, ears, nose, throat, teeth, and the weight and posture of the children. They recorded conditions which were necessary for correction and advised the parents to secure such corrections from local physicians before the child was permitted to enter school. The most commonly encountered defect was decayed teeth. The next most common defect encountered was diseased throat and nose. A large number of the children were found to be underweight and faulty posture was a commonly found defect.

**Doctor Tenent Is Stanislaus County Health Officer.** The board of supervisors of Stanislaus County established a full-time health unit recently and Dr. C. H. Tenent of Memphis, Tennessee, has been selected as county health officer. Stanislaus County is the thirteenth county of the state to establish its health department upon a full-time basis. The county has an estimated population of 64,000. Modesto, the county seat, is one of the most rapidly growing cities in the state. Other incorporated towns within the county are Turlock, Newman, Patterson, Ceres, Oakdale, and Riverbank. Stanislaus County is in a rich agricultural section and offers an ideal field for unified public health administration.

**Tularemia—First Known Case in California.**—It is interesting to learn that the first known case of tularemia occurred in California as long ago as 1904. This fact developed through information contained in a letter written on June 6, 1928, by Dr. T. F. Johnson, for many years health officer of National City, to Dr. Edward Francis of the United States Public Health Service. Doctor Johnson stated that his son contracted an infection from wild rabbits in 1904. According to the history, the boy, then fifteen years of age, residing in National City, San Diego County, when hunting on May 30, 1904, shot and dressed twelve rabbits at Sweetwater Dam. At about the same time he punctured his hand with what appeared to be a "sliver." On June 4, he was taken ill, and the illness was accompanied by swelling of the hand, enlarged epitrochlear and axillary glands. His temperature reached 104 degrees F. The blood serum collected from Doctor Johnson's son June 6, 1928, twenty-four years after this illness, agglutinated *B. tularensis* in all dilutions from 1/10 to 1/160, confirming the diagnosis of tularemia after a lapse of twenty-four years. This information was submitted to the California State Department of Public Health by Surgeon Francis, together with the following statement:

"What I believe to be the very first reference on record to tularemia in rabbits or in man in the United States is contained in a letter written in 1904 by the patient, a boy fifteen years of age, to his sister, in which, while still sick, he relates the source of his infection, his symptoms and the treatment which he received at the hands of his father, Dr. Theodore F. Johnson, of National City, California."

Cases of tularemia were not recognized as such in California until 1927. The disease was made reportable June 2, 1928. A total of thirty-seven cases have been recorded in California. Three of these cases occurred in laboratory workers prior to 1927. Two cases occurred in 1927 in patients who handled jack-rabbits. Sixteen cases occurred in 1928, and fifteen cases have been reported so far this year.—*Weekly Bulletin, California Department of Public Health.*

CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, M. D.  
Secretary of the Board

News Items, January 1930

**Results of October 1929 Examination—Board of Medical Examiners, State of California.**—Charles B. Pinkham, M. D., secretary of the Board of Medical Examiners of the State of California, reports the written examination held in Sacramento, October 22 to 24, 1929. The examination covered nine subjects, and included ninety questions. An average of 75 per cent was required to pass. An allowance of one per cent for years of practice was added to the general average of four applicants who had not received less than 60 per cent in more than one subject. Fifty-six applicants were examined. Fifty-one passed, and five failed. The following colleges were represented:

I. PASSED		
College	Year Grad.	Per Cent
Boston University.....	(1928)	78 5/9
College of Medical Evangelists.....	(1927)	82 2/9
College of Medical Evangelists.....	(1928)	90 7/9
College of Medical Evangelists.....	(1929)	83 4/9
College of Medical Evangelists.....	(1929)	77 7/9
College of Medical Evangelists.....	(1929)	76 6/9
College of Medical Evangelists.....	(1929)	89 8/9
College of Medical Evangelists.....	(1929)	87 2/9
College of Medical Evangelists.....	(1929)	83 8/9
Creighton University School of Medicine.....	(1929)	81 6/9
Creighton University School of Medicine.....	(1929)	83 1/9
Creighton University School of Medicine.....	(1929)	79 7/9
Creighton University School of Medicine.....	(1929)	82 5/9
Harvard University Medical School.....	(1924)	86 5/9
Harvard University Medical School.....	(1925)	88
Harvard University Medical School.....	(1929)	78 5/9
Jefferson Medical College.....	(1929)	82 8/9
Johns Hopkins University School of Medicine.....	(1928)	87 8/9
Johns Hopkins University School of Medicine.....	(1929)	78 1/9
McGill University Faculty of Medicine.....	(1920)	(a) 93 5/9
McGill University Faculty of Medicine.....	(1926)	(b) 83
McGill University Faculty of Medicine.....	(1929)	80
Northwestern University Medical School.....	(1927)	78 8/9
Northwestern University Medical School.....	(1927)	86 8/9
Northwestern University Medical School.....	(1929)	81 4/9
Ohio State University.....	(1926)	84 5/9
Rush Medical College.....	(1929)	89 1/9
Rush Medical College.....	(1929)	83 5/9
Rush Medical College.....	(1929)	78 6/9
Rush Medical College.....	(1929)	85 4/9
Stanford University Medical School.....	(1928)	89
Stanford University Medical School.....	(1929)	81 8/9
Stanford University Medical School.....	(1929)	86 3/9
St. Louis University School of Medicine.....	(1929)	81
St. Louis University School of Medicine.....	(1929)	78 2/9
University of Buffalo School of Medicine.....	(1928)	89 7/9
University of California Medical School.....	(1928)	75 5/9
University of California Medical School.....	(1929)	82 5/9
University of California Medical School.....	(1929)	82 8/9
University of Colorado School of Medicine.....	(1929)	84 1/9
University of Illinois College of Medicine.....	(1922)	(c) 86
University of Illinois College of Medicine.....	(1922)	85 5/9
University of Illinois College of Medicine.....	(1924)	(d) 88 6/9
University of Illinois College of Medicine.....	(1929)	82
University of Iowa, Medical Department.....	(1928)	76 8/9
University of Louisville School of Medicine.....	(1927)	87 2/9
University of Minnesota Medical School.....	(1929)	82 4/9
University of Pennsylvania School of Medicine.....	(1929)	81 7/9
Washington University School of Medicine.....	(1929)	80 3/9
Washington University School of Medicine.....	(1929)	86 1/9
Yale University School of Medicine.....	(1926)	83 4/9

- (a) Was given 5 per cent credit for years of practice.
- (b) Was given 2 per cent credit for years of practice.
- (c) Was given 7 per cent credit for years of practice.
- (d) Was given 5 per cent credit for years of practice.

II. FAILED		
College	Year Grad.	Per Cent
College of Physicians and Surgeons, Boston.....	(1916)	66 3/9
Creighton University School of Medicine.....	(1929)	73 5/9
Creighton University School of Medicine.....	(1929)	73 8/9
University of Prague, Czechoslovakia.....	(1921)	57
University of Guadalajara, Mexico.....	(1928)	25 4/9



Democrito R. Gonzales, mentioned in December "News Items" as having practiced in Los Angeles with fraudulent diplomas and state license, was on December 10, 1929, reported sentenced in the Superior Court of Los Angeles to San Quentin for the term prescribed by law. Gonzales was charged under California's diploma mill law—Chapter 79, Statutes 1927, which makes the use of fraudulent credentials a felony. Gonzales had the following three fraudulent documents, which were seized at the time of his arrest: (1) Cambridge University diploma conferring on him the degree Doctor of Medicine; (2) Columbia University College of Physicians and Surgeons (New York) diploma conferring on him the degree Doctor of Philosophy; (3) a farcical California license; and was reported as carrying on a lucrative practice among the Filipinos in Los Angeles.

According to *The Journal of the American Medical Association* of November 16, 1929, William T. Conwell, Philadelphia druggist, was assessed \$8000 damages as a result of his alleged treatment of a diabetic who lost his leg as a result.

Dr. Joseph Cornell, 128 West Main Street, Hawthorne, late yesterday was arrested and charged with violation of the Harrison Narcotic Act, following the asserted sale of fifty grains of morphin to an undercover agent. (Los Angeles *Daily News*, November 14, 1929.)

Because he was too busy to appear as a witness in a criminal case, Dr. Frank Chase, medical examiner for the New York Life Insurance Company, yesterday was ordered to serve one day in jail today by Municipal Judge Charles D. Ballard for contempt of court. The physician neglected to appear yesterday morning as a witness against Harry Meyers, accused of grand theft and forgery. When he was brought into court late on a bench warrant, Doctor Chase explained that it was too much "bother" to leave his work to make the court appearance. (Los Angeles *Daily News*, November 30, 1929.)

Dr. George E. Darrow of Azusa today was sentenced to five years to life imprisonment, following his conviction by a jury who heard his trial on a charge of second degree murder based on the death of Jennie Peterson, twenty-three, following an illegal operation. Superior Judge Emmet Wilson pronounced sentence after denying the motion for probation . . . (Los Angeles *Herald*, December 2, 1929.)

Hugh H. Slocumb, M. D., on coming to California seemingly did not consider it necessary to obtain a license before commencing practice, our investigator reporting that he had found 185 prescriptions written by Doctor Slocumb within the ninety days prior to his arrest on December 3 on a charge of violation of the Medical Practice Act.

On October 25 the State Board of Medical Examiners filed a complaint against John O. Varian of Halcyon in Judge W. H. Dowell's court in this city, charging him with practicing a system or mode of treating the sick and afflicted without having a state license. He was arraigned before Judge Dowell and pleaded guilty, whereupon he was sentenced to spend sixty days in the county jail, the sentence being suspended on condition that he does not again violate the Medical Practice Act. (Aurora Grande *Herald-Recorder*, November 8, 1929.)

According to the San Francisco *Examiner* of November 24, 1929, Dr. William V. Whitmore, former chancellor of the University of Arizona and licensed to practice in California in 1890, was on November 23 found guilty in Tucson, Arizona, of conspiracy to violate the Federal Narcotic Laws. Doctor Whitmore was reported later sentenced to fifteen months in the federal penitentiary and a \$500 fine.

Margaret Smyth, surgeon and psychiatrist, will serve indefinitely as acting superintendent of the Stockton State Hospital for Insane, Earl E. Jensen, director of institutions, announced here today. Doctor Smyth served as first assistant to the late Dr. Fred P. Clark from 1917 until the latter's death last Sunday. . . . (Oakland *Tribune*, November 23, 1929).

Announcement has been made that Dr. J. C. Johnstone, formerly of the Sonoma State Home at Eldridge, has recently been named as acting medical superintendent of the Pacific State Home at Spadra and that Dr. Charles Ritchie, who has been at Spadra for about a year, has been transferred to the state institution for the insane in Mendocino County.

Mr. Richard M. Lyman, Jr., of San Francisco has been appointed chief counsel of the Board of Medical Examiners, vice Bradford M. Melvin, who resigned to accept a lucrative offer from the Richfield Oil Company.

Colonel W. H. H. Miller, head of the State Department of Registration and Education under Ex-Governor Small, was convicted of conspiracy to issue fraudulent medical and dental licenses last night by a criminal court jury before Judge Jacob M. Hopkins. The jury, which deliberated four hours, fixed Miller's sentence at seven months and a day in the county jail and a fine of \$2000. . . . At one time H. Mitchell Blaine, alleged conspirator, submitted a list of five hundred unqualified persons to whom Miller planned to issue licenses at a price of \$2000 each. . . . State's Attorney Samuel G. Clawsen cited evidence that the diploma ring had agents in St. Louis, New York, and other cities soliciting hospital orderlies, quacks, and laymen with no medical knowledge, to come to Illinois, purchase licenses through Miller's office and engage in practice for which they were utterly unqualified. . . . The state paraded before the jury witnesses who testified to having made payment to Miller for spurious licenses (Chicago *Tribune*, December 11, 1929). Comment: Illinois might well pass a law similar to California's so-called diploma mill law.

Irked by his chosen occupation as a Petaluma chicken raiser, Willie Carlos Barrington (colored) ventured into the realm of medicine. His procedure was to ask a druggist what was good for a certain complaint, then have the druggist write the directions on the container, which Barrington is asserted to have signed and sold to his various patients. On November 30 Barrington was sentenced on each of two counts for violation of the Medical Practice Act to pay a fine of \$300 or serve one day in the county jail of Sonoma County for each \$2 unpaid.

Francis J. Bold, Whittier physician, acquitted November 25 on a second degree murder charge resulting from the death of Mrs. Carmellita Wilhite, Englewood, alleged to have died following an illegal operation, has been cited to appear before the Board of Medical Examiners at the meeting which opens in Los Angeles, February 3, 1930.

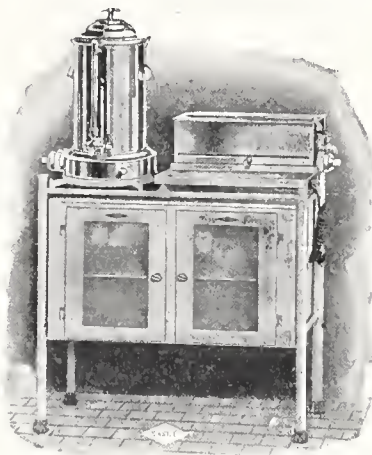
Walter E. Kuhn, an alleged graduate of a Kansas City, Missouri, medical school not approved by the California board, was arrested December 12 on a charge of violation of the Medical Practice Act. On the same day he pleaded guilty in the police court at Chico and was sentenced to pay a fine of \$600, which was paid, and to serve six months in the county jail of Butte County, from which jail sentence he was granted probation, with the provision that he leave the state within ten days. Investigation disclosed that Doctor Kuhn had carried on an extensive practice in and about Chico, our investigator finding approximately one hundred prescriptions written by Doctor Kuhn between the period of June 1 and November 11, 1929.





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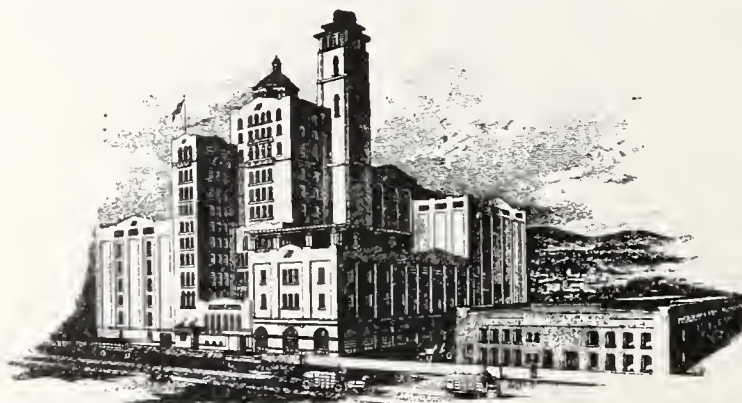
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## TRUTH ABOUT MEDICINES

(Continued from Page 30)

salicylate or mercuric chlorid in that they do not cause severe cramps or sloughing if accidentally injected outside the veins. Solution of invert sugar (Lilly) is marketed in ampoules containing 5 grams, 6 grams, and 7.5 grams, respectively, in 10 cubic centimeters. Eli Lilly & Company, Indianapolis.

**Sulpharsphenamin (De Pree), 0.5 Gram Ampoules.** Each ampoule contains sulpharsphenamin—De Pree (New and Nonofficial Remedies, 1929, p. 71), 0.5 gram. De Pree Chemical Company, Holland, Mich.

**Sulpharsphenamin (De Pree), 0.9 Gram Ampoules.** Each ampoule contains sulpharsphenamin—De Pree (New and Nonofficial Remedies, 1929, p. 71), 0.9 gram. De Pree Chemical Company, Holland, Mich.—*Jour. A. M. A.*, November 23, 1929, p. 1649.

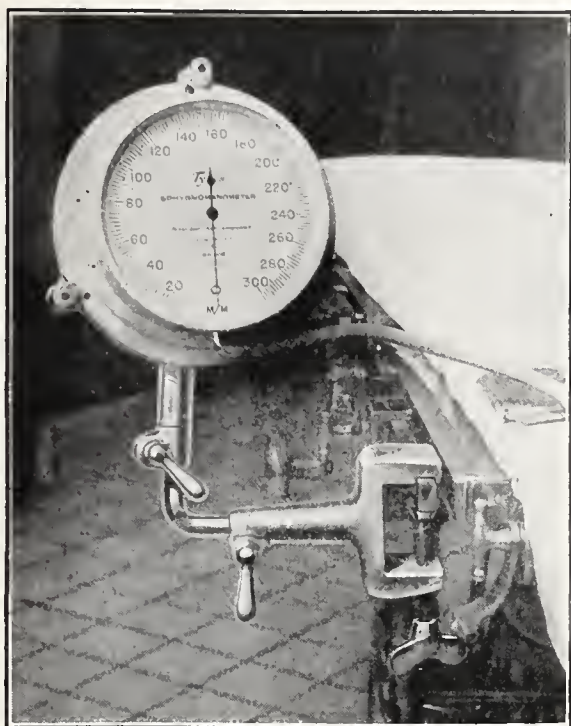
### PROPAGANDA FOR REFORM

**Toxogon Not Acceptable for New and Nonofficial Remedies.**—Toxogon is the therapeutically suggestive name applied by the Von Winkler Laboratories, Inc., Chicago, to a preparation proposed for the treatment of infectious diseases, particularly gonorrhea. The Council on Pharmacy and Chemistry found Toxogon unacceptable for New and Nonofficial Remedies because its composition was not adequately declared; because no evidence was available to indicate that the composition and uniformity of the product was controlled; because the claims advanced for it were unwarranted in the light of the available evidence; and because it is marketed under a therapeutically suggestive name. When the Council's report was submitted to the Von Winkler Laboratories, a reply was received which submitted further information but which did not permit a revision of the rejection of Toxogon.—*Jour. A. M. A.*, November 2, 1929, p. 1383.

**More Misbranded Nostrums.**—The following products have been the subject of prosecution by the

(Continued on Page 38)





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**TRUTH ABOUT MEDICINES**

(Continued from Page 36)

Food, Drug and Insecticide Administration of the United States Department of Agriculture, which enforces the Federal Food and Drugs Act: Acid Iron Mineral Compound (A-I-M) (Acid Iron Mineral Percolating Corporation) consisting essentially of a brownish-colored, slightly acid solution of iron, aluminum and magnesium sulphates, with a small amount of phosphates. Allenrhu (Alle-Rhume Remedy Company) consisting essentially of sodium phosphate and sodium sulphate, with small amounts of sodium salicylate and colchicine, some free acid, in a mixture of glycerin and water) flavored with licorice and wintergreen. Nozol (Nozol Company, Inc.) consisting of a heavy petroleum oil, containing menthol and camphor, colored with a red dye. Lane's Cold Tablets (Kemp and Lane, Inc.), consisting essentially of acetanilid, with small amounts of quinin sulphate, camphor and aloin. Asceine (Serra, Garabis & Company), consisting essentially of caffeine, phenacetin (acetphenetidin) and aspirin (acetylsalicylic acid). Zonite (The Zonite Products Company), consisting essentially of a solution of sodium hypochlorite, yielding approximately one per cent of available chlorine. Fildrysin (Drug Company), consisting essentially of iodids of potassium and sodium with small amounts of compounds of arsenic and mercury, a trace of berberin, glycerin, alcohol, and water. Jayzon's Laxative Cold Tablets (D. C. Leo & Company, Inc.), consisting essentially of acetanilid, with a small amount of cinchona alkaloids and certain extracts of plant drugs, such as aloe, podophyllum and capsicum. *Jour. A. M. A.*, November 2, 1929, p. 1404.

**Quicamphol (Transpulmin) Not Acceptable for New and Nonofficial Remedies.**—In 1927 the Council on Pharmacy and Chemistry considered Transpulmin, offered by the Chemisch-Pharmazeutische A.-G., Bad Homburg, Germany, "for the painless parenteral



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quinin therapy in inflammatory affections of the lower air passages." The Council found the preparation unacceptable and submitted its findings to the German firm. The firm adopted the name Quicamphol for the preparation and took other measures in an effort to make the product acceptable. Quicamphol is now sold in the United States by Spicer & Company, which firm offers it "For intramuscular injection in bronchitis, pneumonia, and pulmonary infections generally." The Council declared Quicamphol (Transpulmin) unacceptable for New and Nonofficial Remedies because the claims for the value of the preparation in the treatment of lobar pneumonia, influenza, etc., are unsupported by satisfactory clinical evidence.—*Jour. A. M. A.*, November 9, 1929, p. 1471.

**Undulant Fever.**—A specific treatment of undulant fever is not yet available. The use of serums has proved disappointing. Vaccines have given more encouraging results according to recent reports from the Continent. In particular, an antigen prepared from dried *Brucella abortus* has seemed efficacious in a small number of cases. In this country the use of acriflavin hydrochlorid has been suggested to shorten the duration of the disease.—*Jour. A. M. A.*, November 9, 1929, p. 1475.

**The D. A. Williams Quackery.**—The Dr. D. A. Williams Company of East Hampton, Conn., has been operating a piece of mail-order quackery for many years. More than ten years ago the Bureau of Investigation of the American Medical Association reviewed the history of the concern and brought out that the business had become so extensive that it had given the little village of East Hampton, with a population of less than 1500 people, a postoffice of the second class! At the time, form-letters sent out by the D. A. Williams concern were signed, variously, "Theodore Flaacks, President," "J. M. Stearns, Manager," and, occasionally, "Dr. E. E. Williams, Medical Advisor." It was also shown that the Dr. D. A.

(Continued on Next Page)

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## TRUTH ABOUT MEDICINES

(Continued from Previous Page)

Williams concern had made a practice of selling to letter brokers the original letters that had been sent to it by prospective victims. It was shown, too, that the preparation sent out by the company for the alleged cure of all "uric acid troubles" was essentially a solution of potassium acetate, colored and flavored with wintergreen. Examination of a specimen sent out by the D. A. Williams concern in October 1929, indicates that the composition of the nostrum has not changed. Recently the National Better Business Bureau investigated the concern. With the assistance of the Medical Information Bureau of the New York Academy of Medicine, four report blanks were filled out and sent to the Williams Company from different parts of the country to determine whether the company declined to sell its product to those who were suffering from serious ailments. Due to the fact that diagnosis by mail is declared to be unscientific and untrustworthy by medical authorities, pronounced symptoms were indicated. In reply a diagnosis and prescription were returned under the signature of Dr. Wilson Powell, New Haven, Conn.—*Jour. A. M. A.*, November 9, 1929, p. 1493.

**Potency of Arsphenamin.**—There is no official standard for therapeutic potency of arsphenamin preparations. According to reports of the United States Public Health Service Hygienic Laboratory, no one brand has been definitely established as superior to others when considered from the point of view of clinical efficiency. In some foreign countries, every preparation of arsphenamin and neoarsphenamin is tested on mice for therapeutic efficiency before being used.—*Jour. A. M. A.*, November 9, 1929, p. 1495.

**Antiustio Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that Antiustio is claimed by the manu-

(Continued on Page 49)



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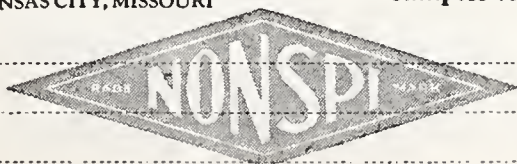
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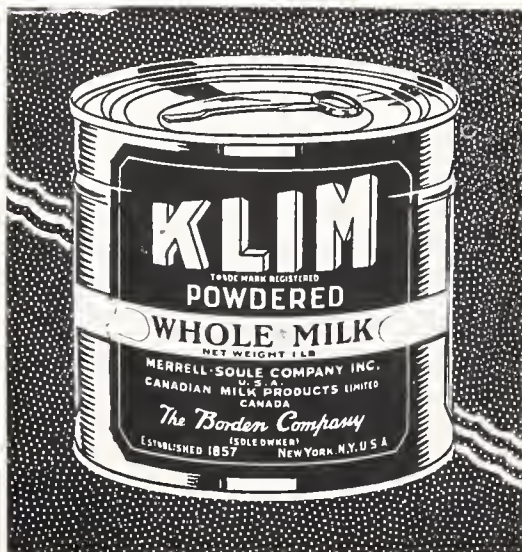
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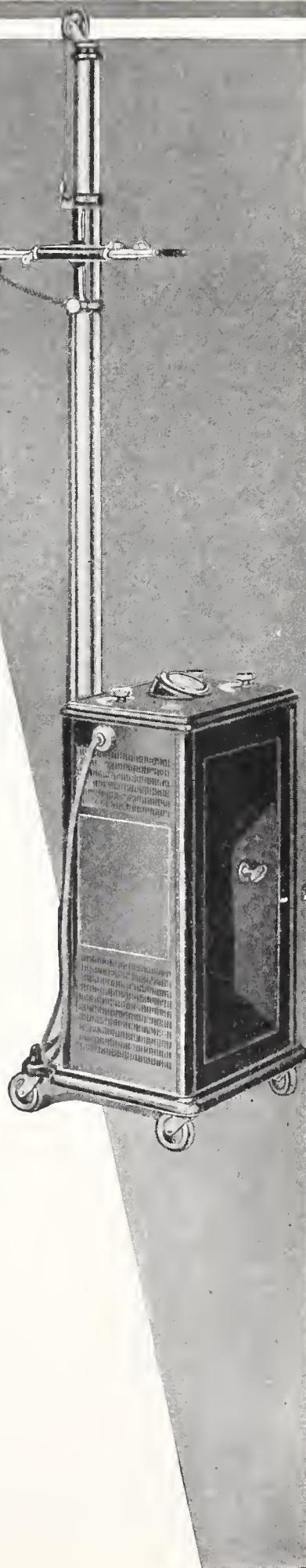
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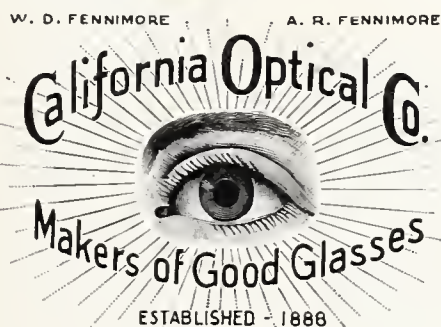


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### TRUTH ABOUT MEDICINES

(Continued from Page 40)

facturer, Frederick Laboratory, Toledo, Ohio, to be "The greatest Burn Remedy in Existence." A circular contains the following indefinite and nonquantitative statement of composition: "Formula, Solvent Solution of Plumbic Materials Subnitrate of Bismuth Zinc Sulphate and Iodid of Lead combined with mineral waxes." From this and other statements it would appear that Antiustio is a petrolatum-paraffin mixture claimed to contain five per cent of bismuth subnitrate along with small but undeclared amounts of zinc sulphate and lead iodid. The Council found Antiustio unacceptable for New and Nonofficial Remedies because it is an unscientific preparation marketed with an inadequate statement of composition; under a name which is not descriptive of its composition and with claims that are exaggerated and unwarranted.—*Jour. A. M. A.*, November 16, 1929, p. 1559.

**Unguentum Carbonis Compound (Hilf) Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that Unguentum Carbonis Compound (Hilf) is marketed by the Hilf Products Company, Brooklyn, and that it is claimed to contain an alcoholic extract of crude coal tar, representing from 2 to 2.5 per cent of "its active constituents" menthol and thymol, each two and one-half grains to the ounce; eucalyptol, five minims to the ounce; salicylic acid, two per cent; in a base consisting of kaolin and "boroglyceride" (equivalent to 10 per cent of boric acid). The Council declared Unguentum Carbonis Compound (Hilf) unacceptable for New and Nonofficial Remedies because it is a needlessly complex and, therefore, unscientific mixture which is marketed with unwarranted therapeutic claims and under a name which is insufficiently

(Continued on Page 54)

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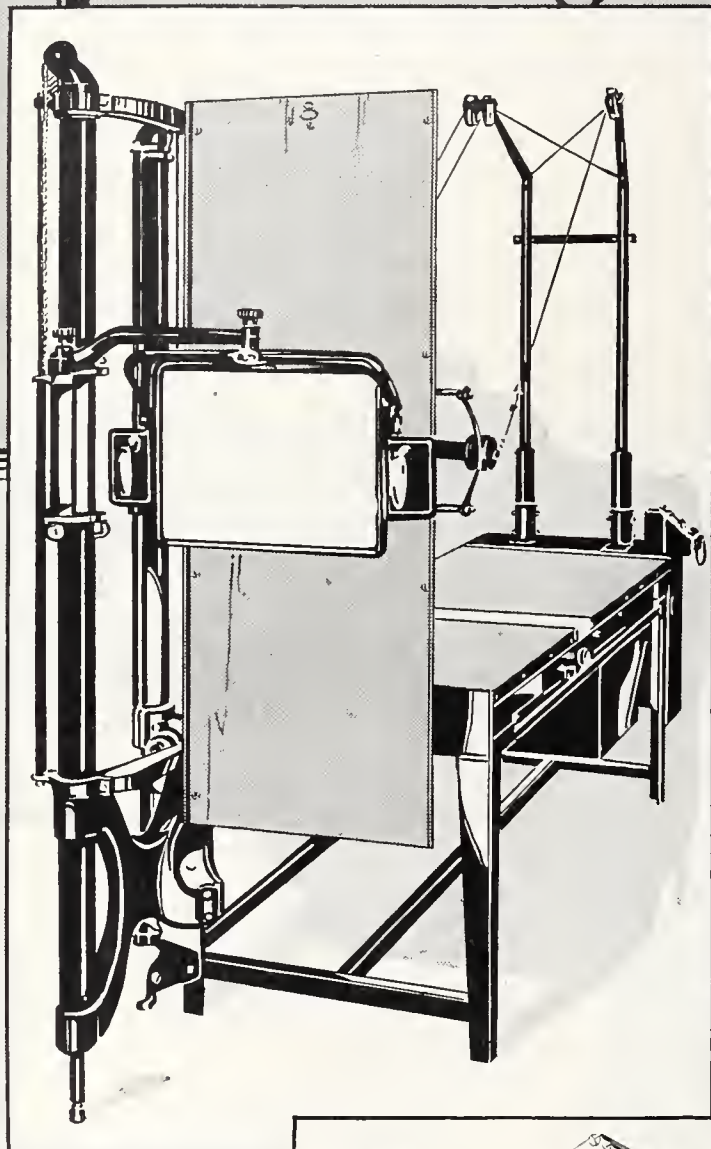
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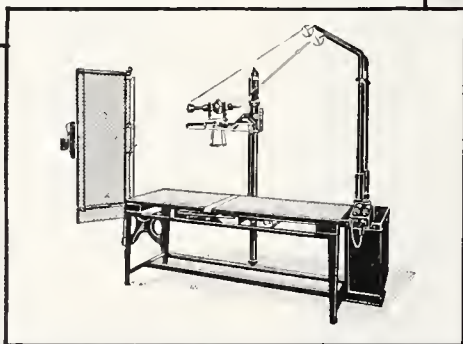
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## TRUTH ABOUT MEDICINES

(Continued from Page 49)

descriptive of its composition.—*Jour. A. M. A.*, November 23, 1929, p. 1649.

**More Misbranded Nostrums.**—The following products have been the subject of prosecution by the Food, Drug and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act: Day's Asthma Powder (William D. Day & Company) consisting essentially of a mixture of stramonium leaves and potassium nitrate. Munyon's Grippe Remedy (The Munyon Remedy Company) consisting essentially of sugar, with a trace of arsenic. P. and R. Chlorin Bombs (The National Research Corporation), each ampoule ("bomb") containing about one-third gram of chlorin. Bronchulets (The International Laboratories), each tablet containing about one grain of acetanilid and four-tenths grain of quinin sulphate, together with camphor and laxative plant drug extracts. Thompson's Grippe and Cold Tablets (The Owl Drug Company), each tablet containing about one-fourth grain of quinin with camphor, licorice, and sugar. Meyer Red Diamond Salve (The Meyer Bros. Drug Company), consisting essentially of petrolatum and wool fat, with oil of turpentine and menthol. Si-Nok (The Si-Nok Company), consisting essentially of a mineral oil containing turpentine, eucalyptus, sassafras, menthol, and camphor. Eagle Menthol Inhaler (The Eagle Druggists Supply Company), each tube containing approximately two and one-half grains of menthol. Cre Sot Rub (The Drain Chemical Company), an ointment containing creosote, eucalyptol, turpentine, and camphor. Nox-Mal-A (The Savodine Company), consisting essentially of Epsom salt, a quinin salt and water.—*Jour. A. M. A.*, November 23, 1929, p. 1669.

**Further Misbranded Nostrums.**—The following products have been the subject of prosecution by the (Continued on Page 56)

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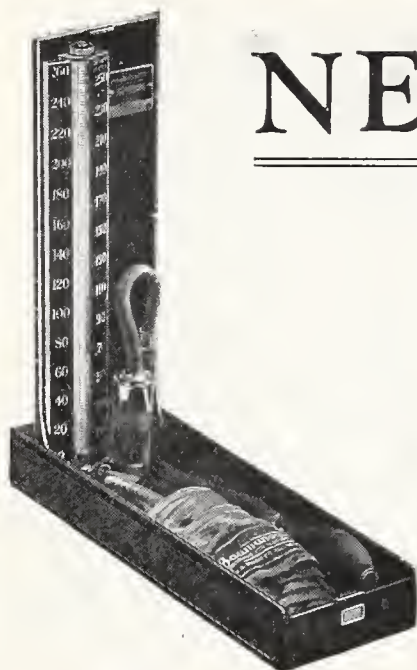
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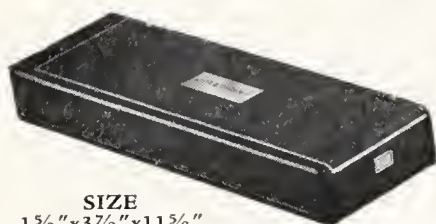


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### TRUTH ABOUT MEDICINES

(Continued from Page 54)

Food, Drug and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act: Rising Mist Salve (Wynn's Rising Mist Company), essentially petrolatum with small amounts of menthol, camphor, and oils of wintergreen and eucalyptus. Grains of Health (Grains of Health Products Company), consisting essentially of roasted coffee, with chicory and some starchy material. Taylor's Laxative Cold Tablets (C. E. Jamieson & Company), containing about one grain of acetanilid and one-tenth grain of cinchonin salicylate, with camphor, red pepper, and some laxative plant drug extractives. Uterine Catholicon (The Graefenberg Company), a liquid containing over

11 per cent of alcohol, together with potassium sulphate and extracts of plant drugs, including aloe. Hermance's Asthma and Hay Fever Medicine (C. A. Bell), consisting of potassium iodid with extracts of plant material, including licorice and the alkaloids of lobelia, all in alcohol and water. Draper's Rub (The Memphis Chemical Company), an ointment having a fatty base, containing menthol, camphor, turpentine and wintergreen. Laxa-Pirin (The Hoosier Remedy Company), each tablet containing about one grain of phenacetin, two grains of aspirin, a small amount of caffeine, a trace of aconite alkaloids, and some laxative plant drug extractives. Nash's Croup and Pneumonia Salve (Nash Bros. Drug Company), consisting essentially of petrolatum, with the usual amounts of menthol, camphor, sassafras, and turpentine.—*Jour. A. M. A.*, November 30, 1929, p. 1751.



# APPROVED CLINICAL LABORATORIES

## Excerpts from American Medical Association Essentials for An Approved Clinical Laboratory

### Definition

*"\* \* \* A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body."*

*"Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved."*

*"The housing and equipment should be sufficient to permit all essential technical procedures to be properly carried out."*

### The Director

*"The director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry or other allied subjects, for at least three years. He must be a man of good standing in his profession."*

*"The director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work."*

*"The director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports."*

*"The director may have assistants, responsible to him. All their reports, bacteriologic, hematologic, biochemical, serologic and pathologic should be made to the director."*

### Records

*"Indexed records of all examinations should be kept. Every specimen submitted to the laboratory should have appended pertinent clinical data."*

### Publicity

*"Publicity of an approved laboratory should be directed only to physicians either through bulletins or through recognized technical journals, and should be limited to statements of fact, as the name, address, telephone number, names and titles of the director, and other responsible personnel, fields of work covered, office hours, directions for sending specimens, etc., and should not contain misleading statements. Only the names of those rendering regular service to the laboratory should appear on letter-heads or other form of publicity."*

### Fees

*"\* \* \* There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group. \* \* \*"*

The following laboratories in California are among those approved by the Council on Medical Education and Hospitals of the American Medical Association:

**Clinical Laboratory of Drs. W. V. Brem, A. H. Zeiler and R. W. Hammack,  
Pacific Mutual Building, Los Angeles, California.**

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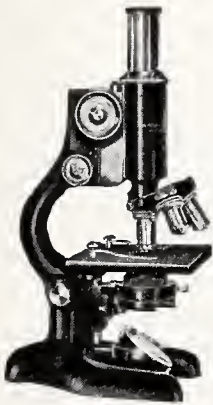
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Increases in rates (per 100,000 population) from those of the preceding year were from the following principal causes: diseases of the heart (217.8 to 239.3), nephritis (110.6 to 117.4), cerebral hemorrhage and softening (72.8 to 78.6), diabetes mellitus (20.3 to 23.5), and cancer (106.4 to 107). Increases were shown also for pneumonia all forms (74.3 to 102.4), influenza (14.2 to 34.8), appendicitis and typhilitis (17.1 to 18.4), meningococcus meningitis (1.8 to 3), lethargic encephalitis (0.9 to 1), and syphilis (14.6 to 15.1).

The death rate from all accidental causes increased from 78.1 to 80.6, the types of accidents showing the greatest increases being automobile accidents (excluding collisions with railroad trains and street cars) (20.7 to 23.6), accidental falls (12.9 to 13.4), and mine accidents (1.6 to 1.9).

Significant among the decreases in rates from 1927 to 1928 were those from tuberculosis, all forms (75.3 to 74.1), congenital malformations and diseases of early infancy (64.8 to 61), diarrhea and enteritis under two years (19.5 to 17.3), measles (4.1 to 1.2), whooping-cough (4.2 to 3.7), and acute anterior poliomyelitis (1.5 to 0.5).

The death rate from burns (conflagration excepted) decreased from 4.8 to 4.2, and from drowning 5.8 to 5.2.

The estimated population for 1928 was 7,396,000 and for 1927 was 7,296,000.—*United States Daily.*

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**The Power of Suggestion.**—The story is told that the manager of a New York hotel recently engaged a clipping bureau to send him everything they found concerning mice jumping out of teapots at fashionable afternoon affairs. He later explained his reason for this unusual request. He said that a lady of some social position, but little means, had engaged a room in his hotel. After a few weeks her bill ran so large that he became afraid it would not be paid. On the last day of her visit she entertained in her room and ordered, among other things, a pot of tea. As she opened the pot of tea, a mouse jumped out of it. In order to keep down the unpleasant publicity that might have resulted, the hotel manager allowed the lady to depart without paying her hotel bill. On engaging the services of the clipping bureau, he merely was interested to know whether or not the lady would work the same trick on someone else.

The same trick may or may not have been worked again in New York, but a situation somewhat similar has arisen in our own state within the past few weeks. The situation in West Virginia involves hot-water burns rather than mice jumping out of teapots.

Several months ago a lady was admitted to a well-known West Virginia hospital with a gangrenous appendix. She was operated upon and the operation was successful. A short time after the lady left the hospital she brought suit to recover \$5000 for injuries she claimed to have received from the application of a hot-water bottle immediately after the operation. Time went on; the case was brought to trial in October, and the lady was given a judgment for \$2000 against the hospital.

On the day after the judgment for \$2000 was returned in favor of the lady, a second suit was entered by an entirely different party against the same hospital, "to recover for burns received from the application of a hot-water bottle immediately after an operation."—*The West Virginia Medical Journal*, December, 1929.



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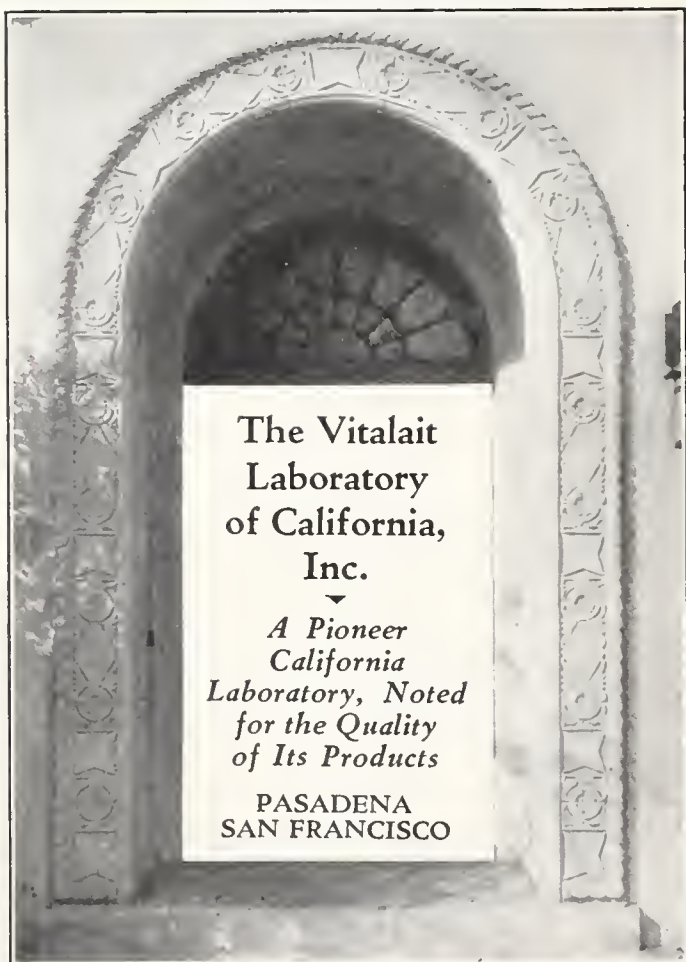
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**Research Fund for Cancer Study Will Be Doubled at the University of California.**—At the regular December meeting of the regents of the University of California, President W. W. Campbell reported that an anonymous gift of \$100,000 from a friend of the university has been received for the support of research in cancer and allied subjects by the Medical School and Hooper Foundation for Medical Research.

With the addition of this fund the university will have a total endowment of \$200,000 for research in this field, as Mr. and Mrs. George H. Roos of San Francisco recently turned over \$100,000 to the regents for research in thoracic surgery and cancer, and later added \$5000 for the equipment of a clinic and research laboratory to carry on this work.

The latest gift of \$100,000 was received by President Campbell following a short correspondence with the donor concerning research projects needing support. In the letter accompanying the gift, the donor said:

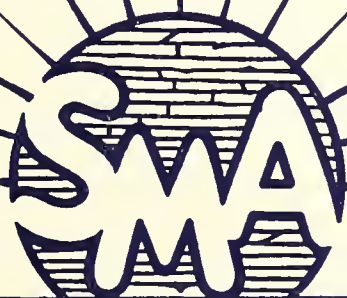
"I note that research work for cancer has already been established, and therefore it will be agreeable to me that the donation be added to the amount already in hand.

"I am enclosing my check for \$100,000, and sincerely trust it will be of benefit in this humanitarian work in which the University of California is engaged."

The work of fitting out a clinic and laboratory in which this research will be carried on, has already been started, and allotments of space have been made both in the University Hospital and in the adjoining building of the Hooper Foundation for Medical Research which is also a part of the university. A committee consisting of Dr. Langley Porter, dean of the Medical School, Dr. H. Morrow, clinical professor of dermatology, and Dr. Harold Brunn, clinical professor of surgery, is administering the plans. To date two men have been appointed on the research staff: Dr. William Faulkner, assistant clinical professor of surgery, and Dr. Selling Brill.—*University of California Clip Sheet.*













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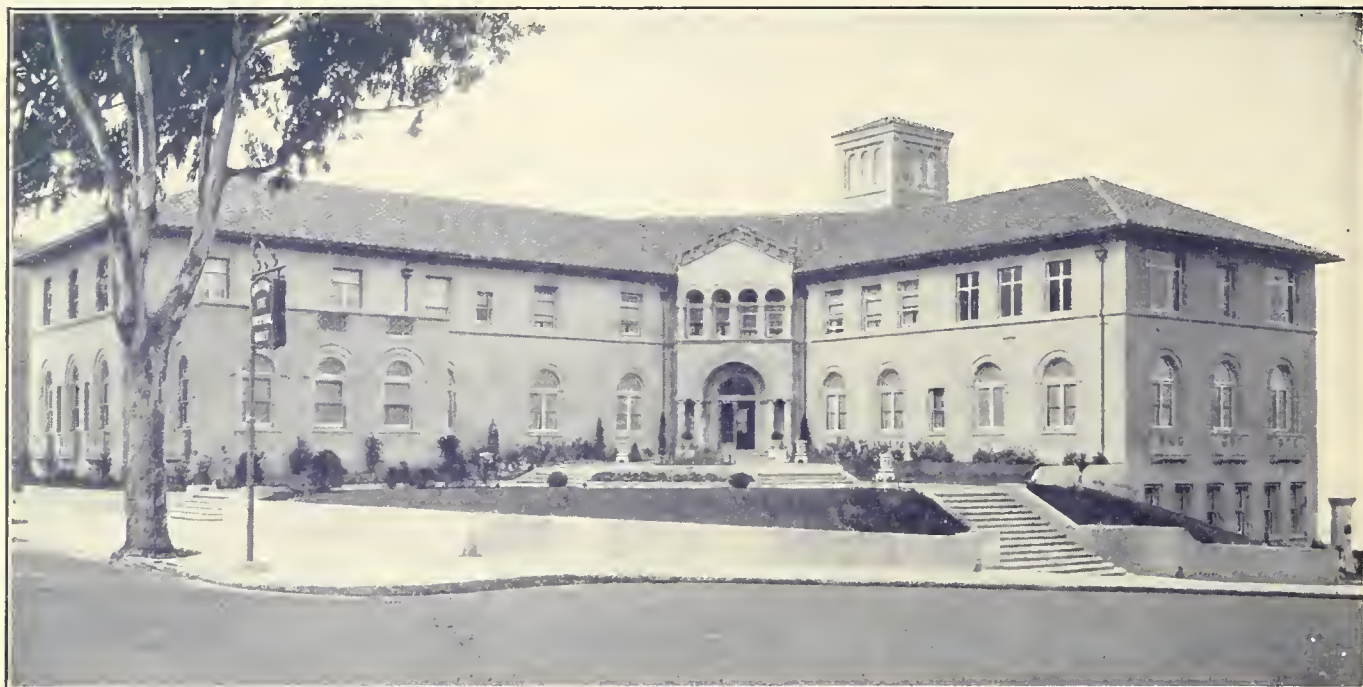
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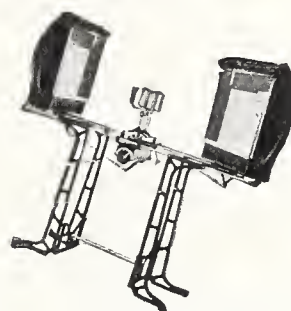
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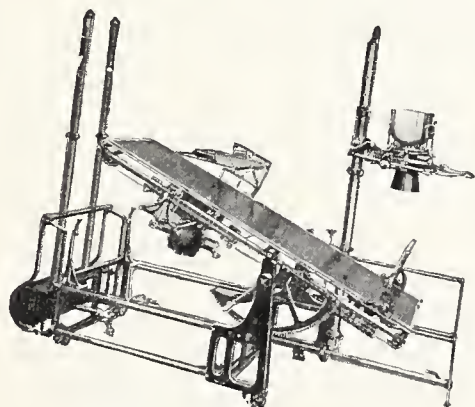
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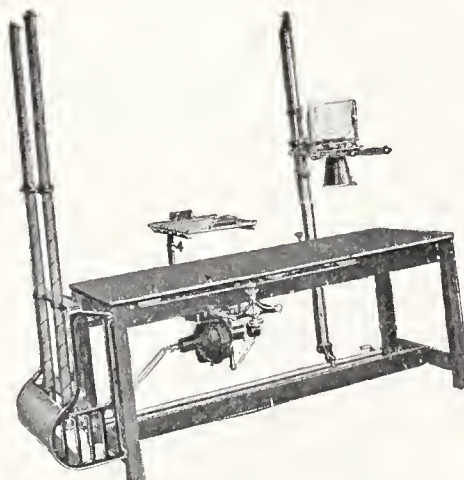
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Secretary, William H. Geistweit, Jr., 810 Medico-Dental Building, 233 A Street, San Diego.

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<b>State Board of Medical Examiners</b> San Francisco, 623 State Building Los Angeles, 821 Associated Realty Bldg., 510 West Sixth Street Sacramento, 908 Forum Building President, P. T. Phillips, Santa Cruz.	<b>Southern California Medical Association</b> President, Paul E. Simonds, Riverside. Secretary, Carl R. Howson, 711 Merritt Building, 307 West 8th Street, Los Angeles.	<b>Better Health Foundation</b> President, Reginald Knight Smith, 490 Post Street, San Francisco. Chairman Executive Committee, Walter B. Coffey, 65 Market Street, San Francisco. Treasurer, John Galloway, 1195 Bush Street, San Francisco. Secretary, Celestine J. Sullivan, 490 Post Street, San Francisco.
	<b>California Northern District Medical Society</b> President, J. D. Lawson, Woodland Clinic, Woodland. Vice-President, Dan H. Moulton, Chico.	

## Nevada State Medical Association

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H. W. SAWYER, Fallon.....First Vice-President	S. K. MORRISON.....Trustees
E. E. HAMER, Carson City.....Second Vice-President	Place of next meeting.....Reno, September 26-27, 1930

## Utah State Medical Association

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WILLIAM L. RICH, Salt Lake City.....President-Elect	Salt Lake City.....Associate Editor for Utah
M. M. CRITCHLOW, Salt Lake City.....Secretary	Place of next meeting.....Salt Lake City, September 9-11, 1930

## Hospitals and Sanatoriums

The institutions here listed have announcements in this issue of CALIFORNIA AND WESTERN MEDICINE

<b>ALEXANDER SANITARIUM</b> Nervous and Mild Mental Diseases Belmont, Calif.	<b>FRANKLIN HOSPITAL</b> Limited General Hospital Fourteenth and Noe Streets, San Francisco	<b>SAN FRANCISCO HOME FOR INCURABLES, AGED AND SICK</b> 2750 Geary Street, San Francisco
<b>ALUM ROCK SANATORIUM</b> For Treatment of Tuberculosis San Jose, California	<b>GREENS' EYE HOSPITAL</b> Consultation, Diagnosis and Treatment of Diseases of the Eye Bush and Octavia Streets, San Francisco	<b>SANTA BARBARA CLINIC</b> 1421 State Street, Santa Barbara
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<b>CALIFORNIA SANITARIUM</b> For the Treatment of Tuberculosis Belmont, San Mateo County, Calif.	<b>ENCINAS SANITARIUM</b> Nervous and General Diseases Las Encinas, Pasadena, Calif.	<b>ST. FRANCIS HOSPITAL</b> Limited General Hospital Bush and Hyde Streets, San Francisco
<b>CANYON SANATORIUM</b> For the Treatment of Tuberculosis Redwood City, Calif.	<b>LIVERMORE SANITARIUM</b> Nervous and General Diseases Livermore, Calif.	<b>ST. JOSEPH'S HOSPITAL</b> Limited General Hospital Buena Vista and Park Hill Avenues San Francisco, Calif.
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<b>COLFAX SCHOOL FOR THE TUBERCULOUS</b> For the Treatment of Tuberculosis Colfax, Calif.	<b>OAKS SANITARIUM</b> For the Treatment of Tuberculosis Los Gatos, Calif.	<b>ST. MARY'S HOSPITAL</b> General Hospital 2200 Hayes Street, San Francisco, Calif.
<b>COMPTON SANITARIUM AND LAS CAMPANAS HOSPITAL, COMPTON</b> Neuropsychiatric and General	<b>PARK SANITARIUM</b> Mental and Nervous, Alcoholic and Drug Addictions 1500 Page Street, San Francisco, Calif.	<b>SUTTER HOSPITAL</b> General Hospital 28th and L Streets, Sacramento, Calif.
<b>DANTE SANATORIUM</b> Limited General Hospital Van Ness and Broadway, San Francisco	<b>POTTINGER SANATORIUM AND CLINIC</b> For the Treatment of Tuberculosis Monrovia, Calif.	<b>CHARLES B. TOWNS HOSPITAL</b> Alcoholism and Drug Addiction 293 Central Park West, New York, N. Y.
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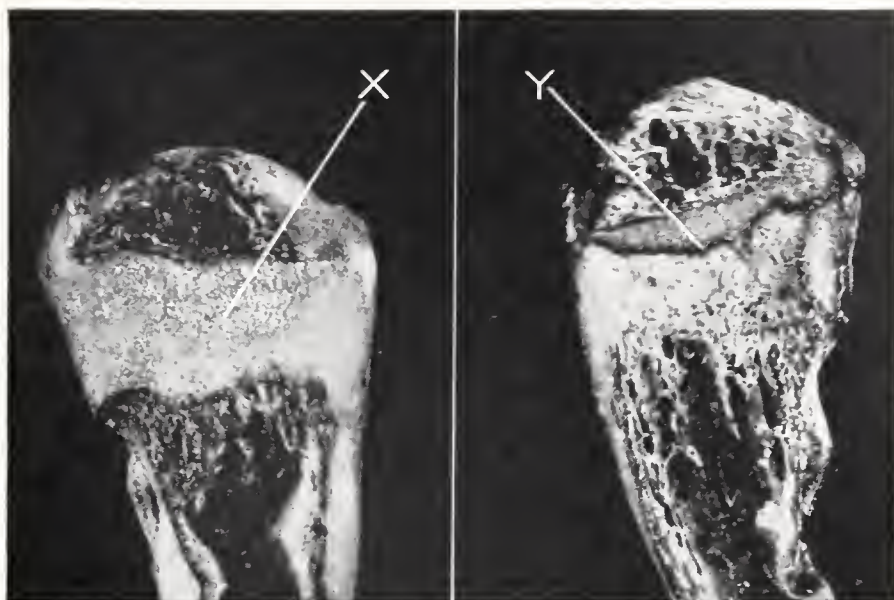
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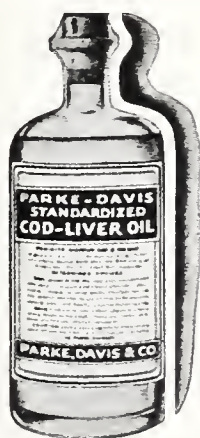
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*Illustrating "Line Test" method of standardizing Vitamin D content. At left, the leg bone of a rachitic rat showing induced decalcification area {X}. At right, healing has begun, as evidenced by initiation of recalcification at dark line {Y}.*



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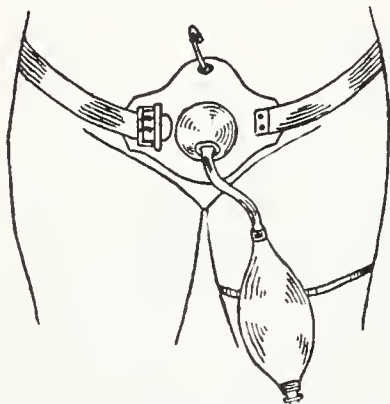
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**EXTERNSHIP IN DERMATOLOGY AND SYPHILOLOGY**—Stanford University Medical School. On March 15, 1930, an appointment to this position will be made for the year 1930-31 (starting April 1st). The salary is \$50 per month (increasing later). About 300 syphilitics per week and an average of 30 dermatological cases per day are treated. There are good opportunities and facilities for research. Applications must be filed before March 1st, stating age and education qualifications of candidate.

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The Practice of Medicine by Corporations and Organizations, was given particular attention. A resolution was adopted, introduced by Past President Doctor Pusey, calling upon the Judicial Council to prepare for the next annual meeting of the House of Delegates a comprehensive statement concerning such practices, for the guidance of the medical profession of America. Objection has been growing more and more emphatic as the practice has increased, and it has increased by leaps and bounds of late. There seems to be a determination on the part of our leaders to not permit medicine to be thus commercialized, bought wholesale by shrewd business men and re-tailed to the consumer on a chain-store basis. An executive meeting of the House of Delegates was held for the purpose of discussing the problem, and we desire to state that it was thoroughly discussed. It is, indeed, a serious situation. As it happens, we are not bothered so much in Texas as in other parts of the country, but it is here and it will grow on us, insidiously, and by offering advantages that we find it hard to forego, a firm foundation will be laid for the continuation of the system and its establishment as a regular thing, unless something is done about it, and soon.—Editorial, *Texas State Journal of Medicine*, September 1929.



## BOOK REVIEWS

**The Nutrition of Healthy and Sick Infants and Children for Physicians and Students.** By E. Nobel, C. Pirquet and R. Wagner. Second edition. Illustrated. Authorized translation by Benjamin M. Gasul. Philadelphia: F. A. Davis Company. 1929.

An English version of the above work is interesting and stimulating. The book is a brief résumé of nutritional disorders in infancy and childhood with discussions of treatment. Professor Pirquet's "nem" system is explained and rather extensive tables of diets are included.  
H. E. T.

**Outline of Preventive Medicine for Medical Practitioners and Students.** Prepared under the auspices of the Committee on Public Health Relations, New York Academy of Medicine. (Twenty-one contributors.) Editorial Committee: Frederic E. Sondern, Charles Gordon Heyd, E. H. L. Corwin. New York: Paul B. Hoeber, Inc. 1929.

This volume of three hundred and ninety-eight pages consists of twenty-one chapters, each of which deals with some branch of preventive medicine. It was written in response to "repeated requests for an outline of the practical features in the prevention of disease" and each contributor has confined his attention to preventive medicine as it affects his own specialty.

There is not sufficient detail for a book of reference or a textbook, but a general survey of preventive medicine is presented in readable form. It should serve a valuable purpose in stimulating greater interest in the prevention aspect of medical responsibility.  
E. C. D.

**Applied Electrocardiography—An Introduction to Electrocardiography for Physicians and Students.** By Aaron E. Parsonnet and Albert S. Hyman, with a foreword by Harlow Brooks. Pp. 206. Illustrated. New York: The Macmillan Company. 1929.

There are so many treatises on electrocardiography, beginning with Lewis' excellent little book, that a new volume is necessarily subjected to comparison. The work here reviewed is by two men concerned with the clinical value of this recording method, and it is remarkable only in that many of the records include radial pulse tracings, so that one clinical feature is thus graphically compared with the electrical record. It contains detailed descriptions of several instruments with judicious remarks on their comparative value. The text and illustrations are fairly full in most sections, but the chapter on coronary artery disease is extremely meager.

There are other omissions of less importance to the practitioner. The book is brief, clearly written, and contains the following novel statement, "Very recently a study of T-wave inversion of the third lead, made by the authors, has shown a certain interesting correlation between such T-wave changes and habitual constipation."  
W. D.

**Rickets, Including Osteomalacia and Tetany.** By Alfred F. Hess. Pp. 485. Illustrated. Philadelphia: Lea and Febiger. 1929. Price, \$5.50.

This is the first monographic work on rickets done in the light of our present knowledge, and most physicians would have wished Doctor Hess to write it. By virtue of his unusual experience in teaching and in research, the author is particularly well fitted to prepare a work helpful in these rather diverse phases of the subject.

The text is treated throughout in a scholarly fashion and is concisely but not ponderously written. There are fifteen chapters in all, the book beginning with a brief and interesting account of the history of rickets. The next six chapters deal with the etiology and pathology of the disease, and the rest of the book with the more strictly clinical side, the last chapter with the treatment. The entire text is well outlined and each chapter would make interesting reading even though the rest of the book were not seen. There is a good bibliography at the end, arranged according to chapters, and the index is excellent.

As Doctor Hess says in his preface, "The book is written for the practitioner of medicine as well as for the nutritional worker." An interesting book, exceptionally easy to read, and written about a rapidly disappearing disease, it will be a volume for the physician's library, rather than for his desk.  
L. B. D.

**The Treatment of Diabetes Mellitus With Higher Carbohydrate Diets.** A textbook for physicians and patients. By William David Sansum, Percival Allen Gray, and Ruth Bowden. Pp. 309. New York and London: Harper and Brothers. 1929. Price, \$2.50.

It is remarkable that so many handbooks for patients should be published, when one considers that their con-  
(Continued on Next Page)



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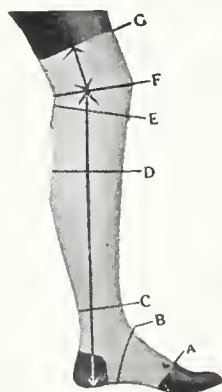
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## TRUTH ABOUT MEDICINES

(Continued from Page 12)

cles (New and Nonofficial Remedies, 1929, p. 485): Child Welfare Guild, Inc. Bite-X.

**Gelatin Compound Phenolized (Mulford).**—A mixture composed of gelatin, zinc oxid, glycerin, and water, containing 1.5 per cent of phenol. It is used in the preparation of bandages to cover chronic ulcers, unhealed secondary burns, and the preparation of pressure bandages for varicose veins when surgical treatment is not necessary. H. K. Mulford Company, Philadelphia.

**Diphtheria Toxoid (Mulford), Thirty Cubic Centimeter Vial.**—Diphtheria Toxoid (Mulford) (New and Nonofficial Remedies, 1929, p. 369), is also marketed in packages of one thirty cubic centimeter vial. H. K. Mulford Company, Philadelphia.

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(Continued on Page 16)

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### TRUTH ABOUT MEDICINES

(Continued from Page 14)

Nonofficial Remedies, 1929, p. 379), is also marketed in hospital size packages containing ten complete immunizations. The Cutter Laboratory, Berkeley, California.

**Ampoule Solution Silver Nitrate One Per Cent (Cutter).**—Solution silver nitrate one per cent, approximately 0.2 cubic centimeter, contained in ampoules composed of beeswax. They are used for the prevention of ophthalmia neonatorum. Cutter Laboratory, Berkeley, California.

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**Polyanaërobic Antitoxin.**—An anaërobic antitoxin (New and Nonofficial Remedies, 1929, p. 346), prepared by immunizing horses with the toxins of *B. tetani*, *B. welchii*, *Vibrio septique* and *B. edematiens*. It is marketed in bottles containing 100 cubic centimeters, each 100 cubic centimeters containing at least 5000 units of tetanus antitoxin, 75 units of Welch bacillus antitoxin, and sufficient antitoxin to neutralize

(Continued on Page 18)





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### TRUTH ABOUT MEDICINES

(Continued from Page 16)

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**Normal Horse Serum Without Preservative.**—A normal horse serum (New and Nonofficial Remedies, 1929, p. 344), marketed in packages of one vial containing 100 cubic centimeters. H. K. Mulford Company, Philadelphia.

**Pollen Extracts (Mulford).**—The following pollen extracts (Mulford) (New and Nonofficial Remedies, 1929, p. 33), have been accepted: Alder Pollen Extract (Mulford); Alfalfa Pollen Extract (Mulford); Annual Sage Pollen Extract (Mulford); Apple Pollen Extract (Mulford); Aster Pollen Extract (Mulford); Blue Beech Pollen Extract (Mulford); Boneset Pollen Extract (Mulford); Brown Grass Pollen Extract (Mulford); Burning Bush Pollen Extract (Mulford);

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(Continued on Page 23)



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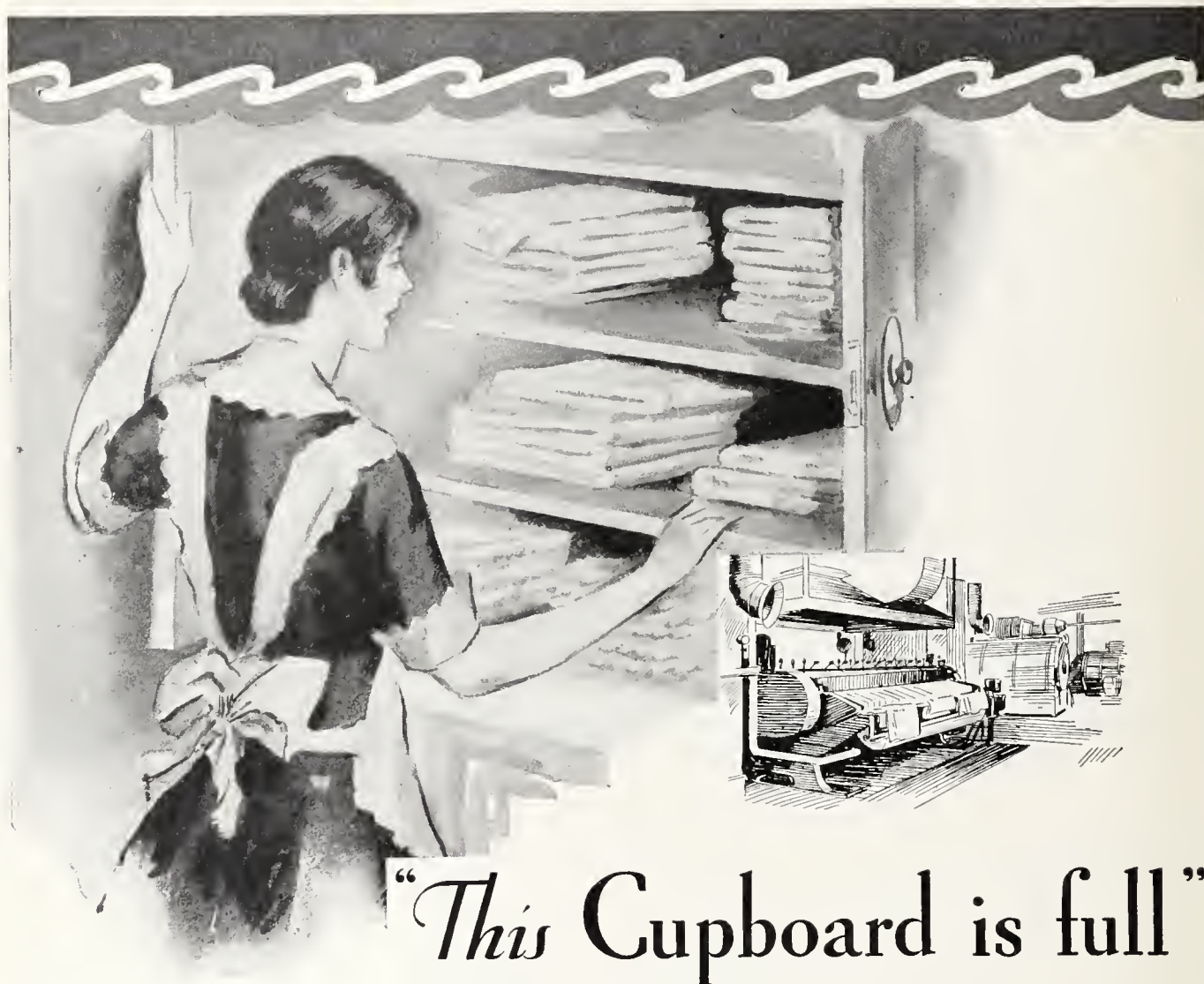
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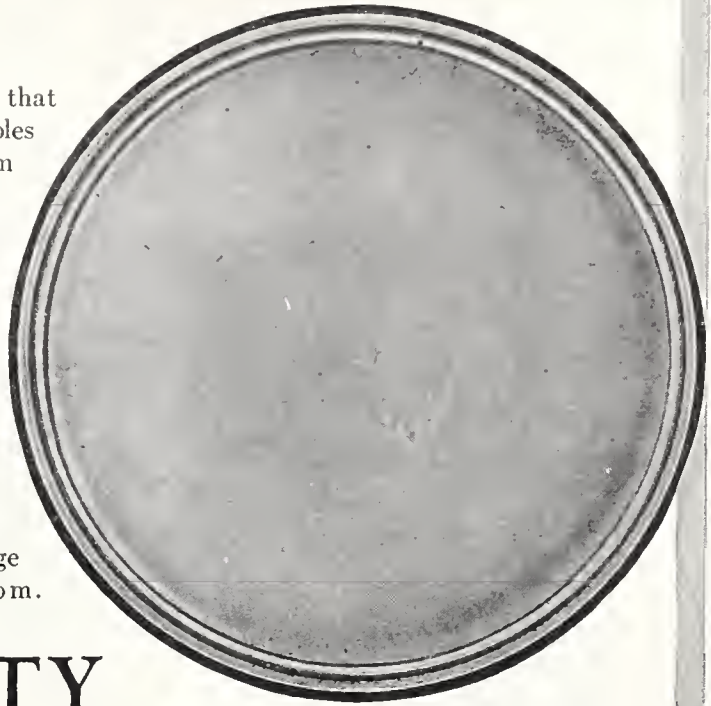
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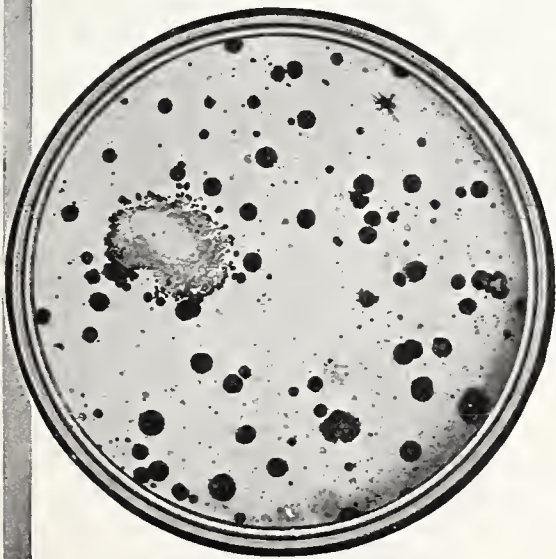


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## TRUTH ABOUT MEDICINES

(Continued from Page 19)

Sodium Cacodylate 3/8 grain, Sodium Hypophosphite 3/16 grain, Manganese Hypophosphite 1/24 grain, Sodium Citrate 5/8 grain, and (Intravenous) Iron, Cacodylate and Glycerophosphate (No. 202) each five cubic centimeter ampoule being stated to contain "Iron Cacodylate (Colloidal)" one grain, Sodium Cacodylate four grains, Sodium Glycerophosphate one and one-half grains. The Council declared these preparations unacceptable for New and Nonofficial Remedies because they are irrational mixtures marketed with unwarranted therapeutic claims. — *Jour. A. M. A.*, December 7, 1929, p. 1809.

**Tucker's Asthma Specific.**—The continued exploitation of this cocain mixture is a standing disgrace to the federal authorities. The nostrum carries a label admitting the presence of five grains of cocain to the fluidounce. When the Commissioner of Internal Revenue was asked in 1922 how such a product could be sent without violating the Harrison Narcotic Law, his reply was that the cocain in the remedy became hydrolyzed before it reached the public, and that when used there was either no cocain or a very small quantity. This commissioner, at the same time, also gave a fulsome puff for the nostrum expressing the opinion that the mail-order distribution of this product served "a great humanitarian cause" and, for that reason, the Treasury Department was taking no action. This in spite of the fact that the product obviously violates the Harrison Narcotic Law, for if it does not actually contain cocain it admittedly contains a derivative of cocain, to which the law also applies. Furthermore, if the product does not contain five grains of cocain to the ounce, then it violates the National Food and Drugs Act.—*Jour. A. M. A.*, December 7, 1929, p. 1829.

(Continued on Page 26)

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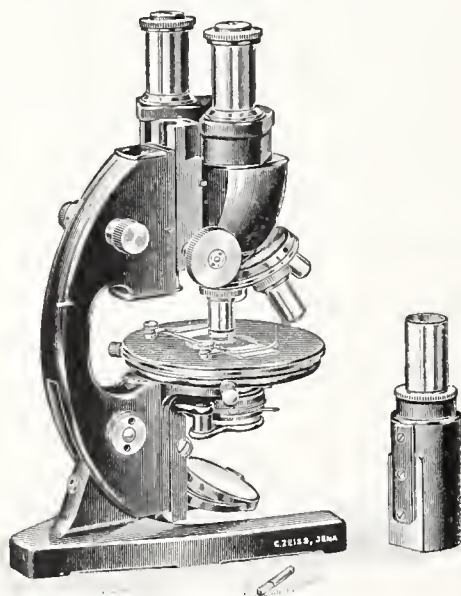
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## TRUTH ABOUT MEDICINES

(Continued from Page 23)

**Zonite Declared Misbranded.**—Zonite is another of the many hypochlorite preparations which arose from the work of Carrel and Dakin during the war. It has been advertised like a typical "patent medicine" under the firm name of the Zonite Products Co. The propaganda for Zonite is, in effect, capitalization on the work of Carrel, Dakin, and others, and the method of exploitation has been that typical of the nostrum business. Chemically, Zonite, after dilution with equal parts of water, is claimed to be essentially the same as surgical solution of chlorinated soda. According to a recent notice of judgment, Zonite was declared misbranded in that certain statements were false and misleading. Zonite has been exploited to both the physician and the public. It goes without saying that it has not been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies.—*Jour. A. M. A.*, December 7, 1929, p. 1830.

**Treparsol.**—Treparsol differs from the better known acetarsone in that it has a formyl group in place of the acetyl group of acetarsone. Its oral use, as with acetarsone, in the treatment of syphilis is not supported by adequate evidence. Treparsol has not been accepted by the Council on Pharmacy and Chemistry. *Jour. A. M. A.*, December 7, 1929, p. 1830.

**Uviol-Jena Ultraviolet Transmitting Glass Acceptable.**—The Council on Physical Therapy reports that the window glass known as Uviol-Jena, manufactured by Schott and Gen., Jena, Germany, and submitted to the Council by the Fish-Schurman Corporation, New York, is stated to be "a glass which transmits the biological ultraviolet rays of the sun" and "in a thickness of two millimeters transmits at the time of installation about 60 per cent of the ultraviolet rays of a wave length of 302 millimicrons" and "even after 'solarization' it still transmits about 48 to

(Continued on Page 28)



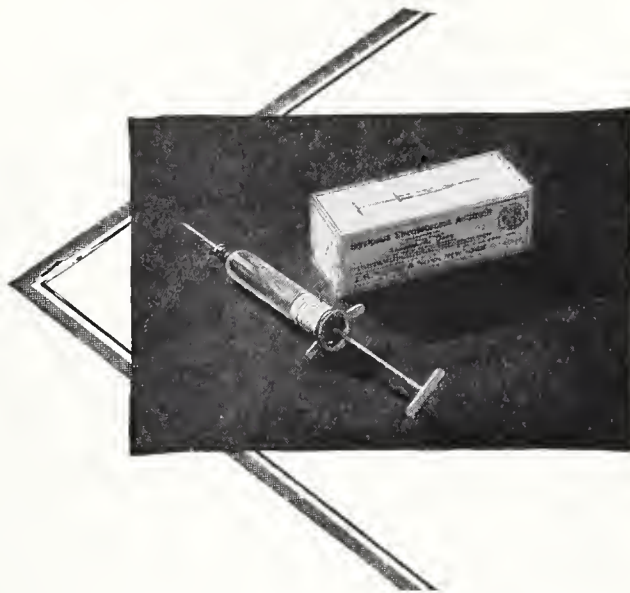
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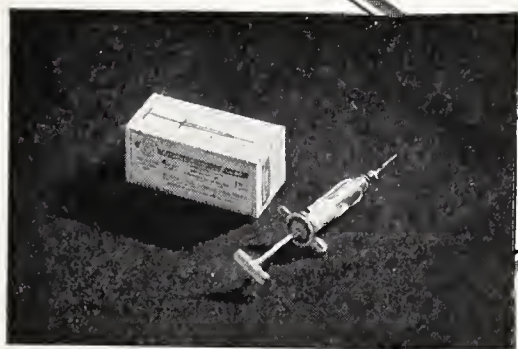


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## TRUTH ABOUT MEDICINES

(Continued from Page 26)

45 per cent of these same rays." The Council reports that acceptable evidence in favor of these claims was submitted and hence declares it acceptable for inclusion in its list of accepted devices for physical therapy.—*Jour. A. M. A.*, December 14, 1929, p. 1887.

**More Misbranded Nostrums.**—The following products have been the subject of prosecution by the Food, Drug and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act: Flu-Zone (R. B. Pettijohn Company) consisting essentially of ammonium chlorid, ammonium carbonate, menthol, chloroform and traces of plant drug extractives, with alcohol, sugar and water. Optolactin Tablets (Fairchild Bros. and Foster) containing an insufficient number of organisms (*Bacillus bulgaricus* and *Bacillus acidophilus*). Adamson's Botanic Cough Balsam (F. W. Kinsman Company) consisting essentially of a syrup containing red pepper, tartar emetic, guaiac and other resinous material, a trace of alkaloids, water, and a small amount of alcohol. Inflammacin (Math-Ol Inflammacin Company) an ointment having a petrolatum base and containing the usual menthol, camphor, oil of wintergreen and volatile oils, including spearmint and eucalyptus. Haywood's Cold and Grippe Tablets (W. R. Warner and Company, Inc.) containing the alkaloids of cinchona, gelsemium and aconite, together with camphor, red pepper and aloes. Lungremed (W. D. Stokes) consisting essentially of ammonium and potassium salts, carbonates, iodids, and creosote flavored with oil of peppermint. Iophen (The Mayer Brothers Drug Company) consisting essentially of small amounts of carbolic acid, iodids and menthol in water. Warren's Wonder Workers (S. Pfeiffer Manufacturing Company) containing acetanilid, quinin, sodium and potassium salts, bro-

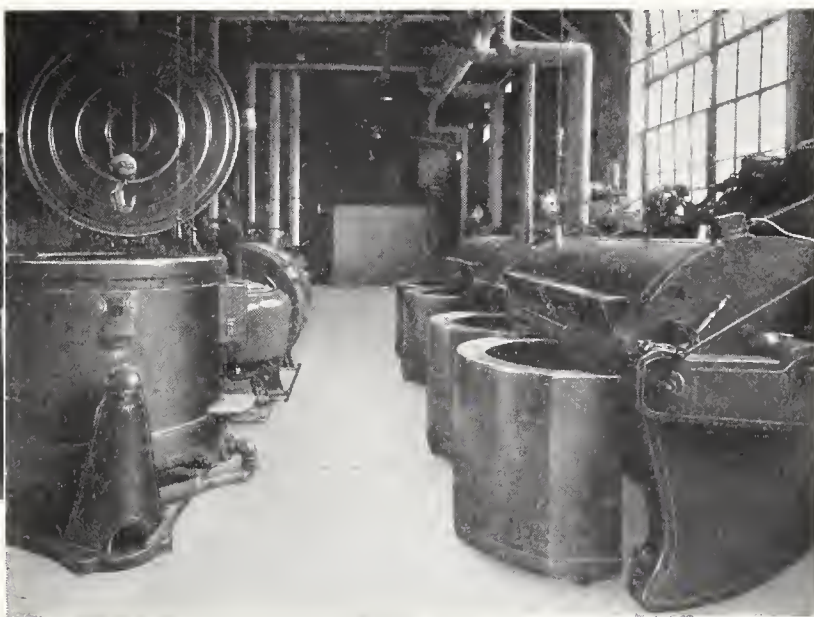
(Continued on Page 30)



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## TRUTH ABOUT MEDICINES

(Continued from Page 28)

mids and aloes. Owen's Oil (The Carolina Chemical Company) consisting essentially of lard, oil, and some other fatty substance containing a small amount of menthol. Fluco (The Fluco Laboratories, Inc.), a liquid containing glycerin and alcohol together with acetanilid, ammonium carbonate, camphor and benzoic acid. Buddies (The Buddies Company), consisting essentially of aspirin (five and one-half grains), caffeine (one-third grain), red pepper, and salicylic acid.—*Jour. A. M. A.*, December 14, 1929, p. 1908.

**Medical Treatment of Cataract.**—About every five years, the ophthalmic world is thrilled by the announcement of a new medical cure for senile cataract. This has been going on for at least two hundred years. Boric acid and glycerin, ethylmorphin hydrochlorid, subconjunctival injections of mercuric cyanid, radium, antigenic injections of lens proteins, mixed endocrine glands, sodium iodid in all possible combinations, and so on, have all had a trial. Not one of them has been scientifically established as of value and more cataracts are being operated on than ever before.—*Jour. A. M. A.*, December 14, 1929, p. 1910.

**Bichloridol.**—Bichloridol is a proprietary preparation of corrosive mercuric chlorid suspended in a "palmitin" base, intended for intramuscular administration. It is sold in compressible ampoules called collapsules. This preparation was formerly marketed by the H. A. Metz Laboratories, Inc., but is now marketed by the Duke Laboratories, Inc. In 1925 the Council on Pharmacy and Chemistry rejected Bichloridol because it was marketed with indefinite statements of composition and under a nondescriptive name. The American Medical Association Chemical Laboratory reports that it analyzed Bichloridol because of inquiries received, one inquirer writing, "One-half to one grain a week gives practically no reaction and likewise mighty little therapeutic effect."

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The laboratory found the preparation to contain only from one-fifth to one-tenth of the mercuric chlorid claimed. The laboratory points out that a discrepancy of this magnitude is inexcusable and comments on the desirability of physicians confining their use of proprietary preparations to products accepted for New and Nonofficial Remedies.—*Jour. A. M. A.*, December 21, 1929, p. 1971.

**The Horovitz Proteins and Lipoids Again.**—"Lipoidal substances" and "protein substances" are marketed under various names by variously named firms. Always, apparently, the chemistry is performed by and the claims are made through A. S. Horovitz. In 1915 it was an alleged cancer cure, "Autolysin," a poultice or extract made from a number of herbs. Then came the "Proteogens" of the William S. Merrell Company, reported on unfavorably by the Council on Pharmacy and Chemistry in 1918. They were numbered, different ones being for the treatment of different diseases. These mixtures of vegetable proteins were exploited to physicians by a sad outpouring of pseudoscience. Next Horovitz became identified with the Horovitz Biochemical Laboratories, with a line of "Protein Substances" similar to the "Proteogens," each claimed to be more or less specific for some disease. Now the successor to the Horovitz Biochemical Laboratories is the Lipoidal Laboratories, Inc., and a number of supply houses act as agents for the firm. "Gonolin," "Luesol," "Osmogen," "Arthritine," "Asthazine," and other preparations similar in stated composition and therapeutic claims to the Proteogens are now promoted for physicians who think that the "bosh" in the circulars is good science because it is so confusing that it is not comprehensible.—*Jour. A. M. A.*, December 21, 1929, p. 1975.

**The Influenza Discovery (?)**.—With little if any apparent warrant, it is again announced, for at least the tenth time in five years, that the causative organ-

(Continued on Page 35)



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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXXII

FEBRUARY, 1930

No. 2

## THE COST OF MEDICAL CARE AND HOSPITALIZATION\*

By A. B. COOKE, M. D.  
*Los Angeles*

IN order to get a correct idea of this subject it is necessary to keep in mind the several factors involved. The patient is not the only consideration. At least three other elements of the problem must be recognized and properly evaluated, namely, the hospital, the nurse, and the doctor. The mutual interdependence of these is self-evident. But it is well to remember that they are *not* equally important. Both doctor and nurse existed and functioned long before there were hospitals—and do still in many communities—and with a fair degree of success. Also, doctors lived and labored before the professional nurse was even dreamed of and, again we may say, with a fair degree of success.

### SOME FACTS—AS THEY ACTUALLY ARE

The purpose of this contribution is not to defend the doctor—he needs no defense—but to say openly a few things which have too long been left unsaid. I hold no brief for my profession, but I believe that an opportunity like this should not pass without an earnest and emphatic plea that the importance and the interests of the doctor be not lost sight of in the hue and cry which has become so fashionable on this question of the high cost of sickness. If the hospital is often hard pressed to keep its head above the waters of financial disaster, if the nurse's claims for more pay and less work are based upon sound principles of justice and fair play—I charge you to remember that the doctor, the pivotal factor about which the whole machinery revolves, should also be taken fully into account in any right thinking upon the subject. That this is not always done is a matter of common knowledge. Speaking of the prevalent custom, the hospital charges are settled in full when the patient is dismissed, and with them, usually the nurse's bill. The doctor comes last. By the time he arrives the pocket-book is empty, and fortunate is he in many cases if, after prolonged and often hectic effort, he succeeds in obtaining even a portion of what is due him. Does he lack the courage to demand

his rights, or does he submit because his conception of professional ethics (God save the mark!) restrains him from open opposition to a vicious and inequitable system, notwithstanding that his very livelihood is at stake?

Prosperity is a grand sounding word, and the huge gobs of it we are said to be enjoying in America at the present time form the subject of smug and vociferous comment in the publicity media of the business world from day to day. Let us, the members of the medical profession, stop and solemnly ask ourselves to what extent we are participating in the loudly acclaimed "good times."

### THE PRACTICAL WORLD AND THE PHYSICIAN

In the economic world the physician is and always has been a sorry spectacle. Immersed in the exacting responsibilities of his daily work, beset with the almost insuperable difficulties of keeping abreast of his rapidly developing science, he has little time for thought of material gain. An easy mark for the public, he is exploited with increasing flagrancy by national, state, county, and municipal governments. As for his position in the domain of industry he has become merely a cog in the wheel, a pawn in the game of big business. For let no one delude himself that the interest of business in this problem of the cost of sickness is in any sense philanthropic or altruistic. It is rather a matter of the actual cash savings to be realized by the wholesale purchase of medical service. And the doctor apparently takes no heed of the ignoble position in which he places himself or the discredit he brings upon his profession by lending his aid to further the schemes of cold-blooded commercialism. It is little wonder that the individual should be contaminated by the spirit of that which he serves, and that the profession as a whole should find itself more and more on the defensive, fighting to retain the respect and esteem which constitute its honorable birthright.

If financial gain or material preferment of any kind followed the operation of customs and conditions such as have been mentioned, the uncomplaining acquiescence of the doctor in these and similar abuses would not be so hard to understand. In this connection I have only to remind you of what we all know, that not 10 per cent of our fellows achieve financial success from their professional labor alone, and that more than

\* Read before a joint meeting of the Southern California Medical Association and the Southern California Hospital Council, Los Angeles, November 8, 1929.

50 per cent of those who reach old age are entirely and pitifully dependent.

The idea of justice to the doctor is so seldom given expression that it will possibly sound bold and strange to many. His own attitude has always been that of dumb and spiritless acceptance of things as they are. Result: The passing years have brought economic and social uplift to all but him, and, sad to say, little promise of improvement is visible on the horizon of tomorrow. Long-suffering may be an admirable Christian virtue, but the fact remains that no other body of equal numbers and intelligence would even hesitate to promote the material interests of its members merely because of sentimental allegiance to certain hoary and outgrown traditions.

For look you! The attainment of happiness is the purpose and the right of every human being, including the doctor. Without health, happiness is merely an idle dream. The maintenance of health, then, or its restoration when impaired, must be recognized as transcending in importance all other objects of human desire and endeavor. To these ends the doctor devotes himself, assuming responsibilities of incomparable gravity and rendering services of incomparable value. Yet strange, almost passing belief is the attitude of the public on the subject. As long as health is a present reality the contingencies, nay the certainties, of the future remain matters of little concern. The purchase, usually on time, of automobiles, radios, and similar luxuries, nightly attendance at the movies and every form of indulgence and extravagance constitute the routine life of the average citizen today. Only when the inevitable sickness or calamity comes, do the doctor and the hospital receive more than passing thought. Then indeed they become agencies of supreme importance. And then what happens? Either the doctor is called and his services remunerated with a specious promise to pay hence, or, more likely, the good offices of a free clinic or hospital is sought. In the latter event the doctor (simple soul!) perforce becomes the agent of service, the only difference being that now he *knows* he will receive no compensation. The doctor and his interests are lost sight of in the shuffle. The cards are stacked against him. Glory and a dribbling of half-hearted gratitude form a large proportion of his reward for a life of arduous and self-sacrificing devotion.

#### HOSPITAL STANDARDIZATION BRINGS INCREASED EXPENSE

I cannot let the occasion pass without expressing my personal appreciation of the hospital and my sympathy with and for it in the struggle it daily faces to make ends meet. Standardization, desirable as it is, has resulted in heavy addition to the operating cost, and the many exacting demands of the times we live in continue to swell the already top-heavy overhead. And I yield to no one in commendation of the nurse, and in sympathy for her and her aims so long as she refrains from employing the methods of trade-unionism to gain her ends. But I insist as vigorously as my command of language will permit

that the doctor, too, is entitled to consideration in any fair discussion of the question before us.

The truth is that the time has fully come when we, the members of the medical profession, can no longer afford to remain passive. Already the drift toward state medicine has set in. The immediate future is full of ominous menace. Less compensation and more work under the direction of bureaus controlled by laymen, utter loss both of independence and dignity—these are a few of the dangers I seem to see lurking just around the corner.

What of the outlook for young physicians just entering upon their chosen life work?

Brethren, let us wake up!

727 West Seventh Street.

### ACUTE UPPER RESPIRATORY TRACT INFECTIONS IN CHILDREN\*

By CLIFFORD SWEET, M. D.  
Oakland

DISCUSSION by Donald K. Woods, M. D., San Diego; Andrew J. Thornton, M. D., San Diego; Harold K. Faber, M. D., San Francisco.

IN all fields of medicine an accurate diagnosis should precede any treatment that is meant to change the natural course of disease. This is especially true when the patient is a child. Often the child is unable to give an exact, detailed history, and his most accurate statements are all too often distorted in being relayed from parent to physician. Likewise, all too often this distortion is multiplied when the physician's mind is impeded by such fixed ideas as: (1) Acute illness in childhood is usually caused by improper food. (2) The intestinal tract is so nearly, if not always, the seat of the pathological process that a thorough cleaning out may, in general, precede other diagnostic endeavor.

#### SIGNS AND SYMPTOMS OF ONCOMING INFECTIONS

Loss of appetite and interest in play, with unusual irritability and otherwise unexplained fatigue, are commonly signs of approaching illness, rather than of original sin. However, the onset of an infectious process in the child is frequently characterized by sharply defined, often alarming symptoms.

*Fever.*—Fever, sudden in onset and of high degree, often marks the beginning of illness which, after the passage of a few hours, proves to be of little moment. Not infrequently a fever of 104 degrees has fallen to a moderate degree or to normal the next day and only a "head cold" is the evident diagnosis.

Fever is evidence of infection, with two exceptions: the dehydration fever, due to severe water deprivation or loss, and the allergic fever resulting from severe anaphylactic reaction in highly

\* From the Baby Hospital, Oakland.

\* Read before the Pediatrics Section of the California Medical Association at the fifty-eighth Annual Session, Coronado, May 6-9, 1929.



susceptible individuals. In most cases infection is the cause of a febrile response, and in children the area most often invaded is the upper respiratory tract.

*Vomiting.*—Vomiting, another common symptom of infection is so frequently present that attention is focused on the digestive tract. With his attention so directed, the physician is easily settled into a conviction that the difficulty lies in the alimentary system. Often this conviction is evidently confirmed by the appearance in the vomitus of food eaten many hours previously, and if, in addition, the not infrequent fall in temperature mentioned above occurs after the administration of a cathartic, the case for the digestive system seems to be so evidently won that further diagnostic search seems to be wasted effort.

Vomiting plays so prominent a part in all difficulties that have their seat within the digestive tract that one does well to use all skill and care in the detection of any pathological process so situated. One who fails to think of appendicitis, intussusception and, in very young infants, of congenital pyloric stenosis, will in the course of years commit diagnostic oversights of grave or even fatal moment.

Rectal examination whenever palpation of the abdomen has aroused even slight suspicion should be a common diagnostic procedure. Only frequent careful rectal examinations bring the acumen of the examiner to a highly trustworthy state of perfection.

Food idiosyncrasy on an allergic basis is of sufficiently frequent occurrence as a cause of vomiting not to be lost sight of. The presence of or history of other allergic signs and symptoms such as hives, eczema, asthma, as well as the usual absence of fever, are of considerable value as evidence of this state.

Still more rarely actual food poisoning from decayed or infected foodstuffs needs to be given thought. With improved inspection and care of foods this is a constantly diminishing cause of illness.

After all these causes for vomiting have been summed up there remains by far the most frequent cause, *i. e.*, the vomiting which is a part of a systemic response to a toxic invasion from a seat of infection located most frequently in the upper respiratory system. Urinary tract infection, osteomyelitis, or other infection may, of course, produce an identical response to the absorption of bacterial toxins. The mechanism of this response may well be explained by analogy. When apomorphin is given by hypodermic no anatomical change occurs in the stomach, but function is interfered with through the medium of the central nervous system.

Acetonemic, or so-called cyclic vomiting, is in general a response to the invasion of bacterial toxins. Since the upper respiratory tract is, in point of frequency, by far the most usual seat of localized infection, here again it plays the principal rôle. The connection between the respiratory tract infection and the onset of this type of vomit-

ing is often obscure. The infection is usually of a low-grade type, producing but little constitutional response in the way of fever, or malaise, and may precede or follow the onset of vomiting by such a number of days (often two or three) that the direct connection between the two is lost sight of. However, if careful observation of the upper respiratory tract is carried out, undoubted evidence of infection of the pharynx, middle ears or paranasal sinuses will be convincingly apparent. Cessation of or at least a marked drop in frequency and severity of attacks of acetonemic vomiting, following the removal of tonsils and adenoids or the drainage of infected antrums, is also strong circumstantial evidence in favor of respiratory tract infection being the chief etiological factor.

In acetonemic vomiting the response may be in part an anaphylactic or allergic one, at least an allergic family history and other undoubted allergic symptoms are sufficiently often present to give this thought a considerable foundation.

*Diarrhea.*—Diarrhea, at least here in California, is also, in a large majority of its appearances, a functional reaction to the systemic absorption of bacterial toxin. In considering the causes of diarrhea, one must remember: acute pyogenic colitis and enteritis; specific infections, such as dysentery and typhoid, which localize in the digestive tract; food substances which act as irritants either because they have undergone bacterial putrefaction or because the host is allergic to them or because they are unripe or otherwise not properly prepared for the use of the young human being; and appendicitis, which may cause a profuse watery diarrhea, especially in very young children.

After giving due weight to all other causes, infection outside the digestive tract remains the most frequent cause of diarrhea in children, as Marriott and others have found.

*Convulsions.*—Convulsions not infrequently are a part of the stormy onset of acute respiratory infection. Here the bacterial toxin shows the result of its attack upon the central nervous system. The question arises, is the convulsion the direct result of the reaction of the toxin on the nervous system or does the toxin so disturb the heat regulatory function that the convulsion is produced by the excessive fever? In any event a high degree of fever usually attends convulsive attacks. Reduction of the fever quiets the over-irritated nervous system and the most certain method of preventing the onset of convulsions is the prompt and sufficient use of hydrotherapy. Immersion in a deep, warm tub bath for from twenty to thirty minutes or the use of a warm, wet sheet and blanket pack for one hour are most useful. The fever usually falls and the patient often sleeps quietly for hours. That these measures have not been commonly used by physicians is indicated by the surprise and fear with which their recommendation is greeted by patients who have not used them formerly. An ice bag on the head is also of value and, in extremely high fever,



cold sponging may be necessary in order to reduce the fever.

A tendency to have convulsions is more marked in some individuals than in others. This tendency is not infrequently a familial one, following the usually observed laws of heredity. Again, reasoning by analogy, a certain number of people are susceptible to seasickness while others succumb only under unusual conditions. However, since the degree of toxemia necessary to produce so marked a reaction as convulsions in even susceptible individuals must be considerable, the digestive tract may well have its function simultaneously interfered with. Quite often, therefore, at or near the time of the onset of convulsions, food is vomited or removed from the stomach which was eaten hours previously. Again one is tempted to ascribe to the undigested food a causal rôle in relation to the convulsion, when, in reality, both the convulsion and the failure of digestion to make its normal time progress are the result of the action of bacterial toxins.

The contents of the gastro-intestinal tract may become infected during the period of stagnation produced by bacterial toxemia. This possibility is lent color by the well-known fact that urine, held stagnant within the urinary tract by congenital or induced interference with normal passage, becomes itself the seat of bacterial growth and reproduction. While this possibility must be admitted, it does not seem to deserve too great weight in one's search for the cause of the symptoms under consideration.

In the first place, normal peristaltic progress is interfered with strikingly within a short period of time. That bacterial toxins could be quickly produced in clean food materials within the relatively sterile upper digestive tract, in the presence of the digestive juices, all of which possess considerable bactericidal powers, seems very improbable. Secondly, food materials that are known to be infected have a very marked irritant action on the digestive tract producing, not stasis, but an unusually severe grade of vomiting and purging. Third, the mucosa of the digestive tract and its appendages do not lend themselves readily to generalized bacterial invasion, and when localized infection takes place, as in the appendix, symptoms which are definite and unmistakable arise. Likewise when an inflammatory or ulcerative colitis is present, evident signs of its presence are seen in the passage of mucus, blood, and purulent material. One who stands often at the post-mortem table and sees the healthy appearance of the digestive organs and the frequent presence of pathologic changes in the upper respiratory passages soon learns by which system the burden of infection has been borne. In addition, the most important evidence, lending itself to objective demonstration, if careful search be made, is the presence of localized reaction to bacterial invasion within the visible portion of the upper respiratory tract.

*Abdominal Pain.*—Abdominal pain is a very common symptom of upper respiratory tract infection. Many children with tonsillitis make no

complaint of the throat, but complain insistently of abdominal pain or discomfort. I have no exact explanation to offer for this frequently observed fact. Brenneman has studied this symptom and wisely observes that its cause must be carefully worked out each time it occurs and no conclusion reached by snap judgment.

*Allergic Outbreaks.*—The careful observer of the upper respiratory tract cannot long doubt that infection in this region is a very important factor in allergic outbreaks such as attacks of asthma, eczema, hives, and urticaria. The mother of the asthmatic child volunteers the information that attacks are ushered in by a cold almost uniformly. The upper respiratory tract infection in this instance is not the cause of the allergic response, but merely, if you please, "opens the door" allowing a protein invasion to overflow or break down the patient's threshold of allergic resistance.

#### IMPORTANCE OF RESPIRATORY INFECTIONS IN CHILDHOOD

That the importance of upper respiratory tract infection in childhood is not sufficiently appreciated my experience teaches me. This experience has been gathered: First, in an active practice extending over several years in two representative California communities. Second, from the teaching of interns who are recent graduates of Class A medical schools quite representative of the entire United States. These young physicians may be assumed to reflect, without too great distortion, the teachings of their respective schools. Third, from an active clinic practice which is the most certain measure of the current medical ideas of the community in which one works, as the clinic patients come out of the practices of the entire medical fraternity, reflecting, in the mass, the medical teaching to which they have been subjected. Fourth, from a sustained interest in the study of medicine which causes me to exchange ideas with physicians wherever we may meet.

My experience is illustrated by the family physician who, during the course of taking the patient's history, roundly scolded the mother for allowing the child to partake of ice cream and a ripe banana (both wholesome foods) several days previously; thereby placing the entire blame for the illness upon the mother and the child's gastro-intestinal tract. The demonstration of an extensive bronchial pneumonia and a bilateral purulent otitis media made it difficult to maintain the mother's confidence in that physician. Another physician stated, in the parents' presence, "We are dealing with nothing but an intestinal infection, and during each of the past fifteen days the fever has been reduced within twelve hours by a dose of castor oil and an enema." The presence of a bronchial pneumonia, with its usual temperature curve made some embarrassing moments for all of us. I hasten to add that both these physicians are skillful, reputable members of our profession whom I hope I possess as friends, who had failed in making a diagnosis because the



major part of their attention had been focused upon the intestinal tract.

My teaching experience with interns is illustrated by the frank doubt with which they, one and all, first receive the statement that the gastro-intestinal upsets of children are nearly, if not all, brought about by demonstrable localized respiratory tract infection. At ward rounds, when the question is asked "Why is this child vomiting? Why has he a diarrhea? or Why has he had convulsions?" the answer has been, "He has eaten something which has disagreed with him or his mother has fed him wrongly." Only after many cases have been studied and he has had an opportunity to see develop an acute follicular tonsillitis, a pharyngitis, a purulent otitis media, or a sinusitis, does he come to believe that food does not usually cause these symptoms. Then in tones of self-confident assurance he heads his list of causes with "an acute infection, usually of the upper respiratory tract."

The acute upper respiratory tract infection is overlooked because it does not occupy its deserved place of importance in the mind of the physician.

#### EXAMINATION METHODS

If the upper respiratory tract is to be examined in anything like sufficient detail, an adequate source of light must be used. Only under unusually favorable circumstances can daylight be used for examination of the throat, not to mention the ear and nose. Only with the head mirror or especially lighted instruments can anyone consistently make the detailed examination which is necessary for accurate diagnosis.

The sudden, stormy onset of infection in the child causes the physician to be called early in the illness. Therefore the patient is seen before localized pathologic changes have taken place. A throat apparently normal today will have the typical and unmistakable appearance of a florid follicular tonsillitis tomorrow, at which time the temperature may be normal and the child reported "much better." The follicles of the tonsils are outlined by and filled with sloughed material. Hours are necessary for the organization of this slough.

On the other hand, the localizing signs may disappear from the throat long before the other symptoms have subsided. Rarely, however, is tell-tale evidence of the true nature of the difficulty lacking if the throat, nose, and especially the ears, are carefully examined. The ear-drums often remain discolored or injected for days after an acute infection and almost always become injected before its course is run. It has been said that "The eye is the window of the soul." It may be said with more abstract truth that the ear-drum is the screen upon which is pictured the state of the mucous membranes of the accessory cavities of the upper respiratory system.

Every child should have frequent complete physical examinations. While the time-honored custom of emptying his digestive tract has its place in therapeutic procedure, it should not precede the examination and under no circumstance

should it serve as a substitute for careful physical examination.

The upset stomach is a symptom and should not be elevated to the dignified level of a carefully arrived at diagnosis. The Irishman who had never seen a horse was puzzled which to put first—the horse or the cart. Infection is the horse, and disturbed function of the digestive tract, or nervous system, is the cart and follows after.

#### SUMMARY

Acute infections, the area of invasion being usually within the upper respiratory tract, are responsible for many departures from a healthy state in children. Loss of appetite, fever, vomiting, diarrhea, abdominal pain, and convulsions are usual symptoms and signs of such acute infection. This view, kept in the foreground of the physician's mind, will enable him to practice medicine more successfully and so make his community a better one for children to live in.

242 Moss Avenue.

#### DISCUSSION

DONALD K. WOODS, M. D. (El Prado Comercial, Fifth and Laurel, San Diego).—Doctor Sweet's paper strikes the keynote in the more advanced thought in connection with disease in childhood. In talking to any group interested in children, it would seem impossible to put too great an emphasis on the symptoms pointing to infections of the respiratory tract.

Practically all disease in children, as we see it in private practice, is located in the upper respiratory or gastro-intestinal tract. I believe most authorities today feel that the majority of gastro-intestinal upsets are due primarily to upper respiratory infection, thus leaving upper respiratory tract infections as the outstanding source of practically all illness in childhood. Therefore early recognition and active treatment of these infections, particularly those of a mild nature, would greatly reduce the incidence of disease in childhood.

Discharging nostrils, especially chronic, often mean an infected sinus or large infected adenoids. The nonrecognition or disregard of these mild chronic or subacute symptoms often leads to more serious troubles in sinuses, cervical glands, mastoids, lungs, heart, kidneys, or colon. Desire for fluids is often mistaken for desire for food in the early stages of acute respiratory infections. The child is, therefore, often overfed, especially with milk, and the gastro-intestinal indisposition added to the original infection.

Practically all children who die of different affections in hospitals or foundling asylums, show foci of bronchopneumonia in the lungs. Most of these fatal cases possibly started with mild infections which were not considered important. The onset of the illness was only dated from the time when the condition of the patient had become serious. The original infection in most of these cases was overlooked. Many cases such as these, with possibly serious or fatal termination, will be avoided by early attention to mild symptoms of infection in the upper respiratory tract.

However, we must not entirely overlook the possibility of allergic reactions. I believe that the lowered resistance of many children, due to varying phases of protein sensitivity, makes it possible for otherwise harmless infections to develop.

It is very possible that many cases showing symptoms of upper respiratory infection were primarily such, but I believe a great many start with gastro-intestinal upsets due to constant contact with proteins to which the individual is sensitized. In all of these cases we should not be satisfied with the symptoms whether they apparently arise in the intestinal tract or the upper respiratory, but, as Doctor Sweet



indicates, we should be more careful in our search for the true underlying cause of the symptoms which present themselves.

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ANDREW J. THORNTON, M. D. (3235 Fourth Street, San Diego).—This paper deals with the practical side of our everyday practice.

Doctor Sweet has emphasized many times, in fact, the whole paper seems to be constructed around the idea that infection is the great cause of illness in children, and as a rule not errors in diet.

We have all been told many times that the vast majority of infections in children begin in the upper respiratory tract. But we need to be reminded of this fact frequently lest we lapse back into the rut of thinking that possibly food or teeth are responsible for the stomach upset or fever in a child.

Mothers and fathers like to hear the doctor say that food has upset the baby because that is what they think has caused the trouble and they are pleased to have someone agree with them.

Diagnosis in children requires industry and alertness. One does not often get by with a guessed diagnosis because mothers are rapidly becoming accustomed to thorough examination and careful attention to every detail of treatment by the pediatricist and his efficient office force.

If the cases are seen early there may be very little or no evidence in the throat, ears, or nose of the infection, yet if the child has fever and has vomited, or has had a convulsion, the doctor knows there is an infection causing the trouble. It may be twenty-four hours or even more before the throat is very red or the tonsils swollen.

In cases of pyelitis in babies we may never find any other symptom than fever, yet how frequently we see such patients with a history of repeated attacks in whom so-called biliousness and the gastro-intestinal tract were blamed for the whole trouble.

If the doctor does not find sufficient evidence for a definite diagnosis after one or two examinations, let him frankly say that he has not yet found the cause of the symptoms or, if he feels that the type of parent requires a definite statement, let him place the blame on the upper respiratory tract rather than on the gastro-intestinal tract and errors in diet.

✽

HAROLD K. FABER, M. D. (Stanford University Hospital, San Francisco).—Doctor Sweet is right—and performs a valuable service to the medical profession in calling attention to the fact—in insisting on the relative infrequency of primary acute digestive disorders in children and the vastly greater frequency of infections, usually upper respiratory, with secondary digestive symptoms. The fault—as with the still older and now less tenaciously held fear of the dangers of teething—really lies with the pediatric teaching of a generation or less ago. The cornerstone of instruction in children's diseases up to comparatively recent times was the gastro-intestinal tract, which was firmly believed to be the basis of most juvenile complaints. It has taken pediatricians a long time to appreciate that such a view is not in consonance with the facts. Meantime it has become firmly fixed in the lay mind. The medical man, therefore, finds it only too easy to satisfy the mother with the diagnosis of "stomach upset" and a prescription of castor oil, and is himself too apt to be content with such an explanation and treatment of symptoms.

Doctor Sweet's paper is of great practical importance not only to the general practitioner, but also to those who are responsible for the education of medical students, and of the lay public in medical matters.

## HEART DISEASE—ITS MODERN DIAGNOSIS\*

By L. E. VIKO, M. D.

*Salt Lake City, Utah*

THIS paper does not attempt a complete summary of the modern diagnosis of heart disease, but rather tries to evaluate certain of the means of diagnosis, to suggest sources of error and to indicate some of the differences between our present ideas and those of the past. The opinions expressed are based partly upon observations made in some American and European clinics and partly upon an analysis of seven hundred of our own cases. With regard to the latter material, I shall avoid statistics, which are merely one means of expressing conclusions. Such a case analysis justifies itself in clarifying one's own ideas, too often based on a few outstanding cases, forgetful of the many others. Also it calls to mind errors made in diagnosis or prognosis—errors revealed by time or more careful examination, errors that one subconsciously wishes to forget.

### HISTORY OF DIAGNOSTIC PROGRESS

Today, the word "diagnosis" as applied to heart disease demands much more than formerly. That we may better appreciate the meaning of cardiac diagnosis, let me digress for a moment to the development of our present knowledge of heart disease. It will be recalled that before Galen, in the second century after Christ, little was known even of the anatomy of the heart or circulation; heart disease was an unknown quantity. From the second to the seventeenth century, great anatomists, such as Galen, Vesalius, Leonardo da Vinci, and Eustachius, dissected the human body and described the heart and blood vessels. But still, heart disease remained unknown except for an occasional description by the anatomist, of abnormalities observed in an excised heart. The course of the circulation, too, remained unknown until the great work of Harvey in 1628. With the discovery of the capillary circulation by Malpighi and Van Leeuwenhoek an understanding of the circulation was possible. Following them came the age of the pathologists and the beginnings of cardiac diagnosis. At autopsies pathologists recognized abnormalities of the heart muscle, cavities, or valves, and assumed these to be the cause of death. With the discovery of percussion by Auenbrugger in 1750 and of auscultation by Laennec in 1819, clinicians secured means for recognizing certain physical signs in their patients and correlating these with the autopsy findings. But still the diagnosis was entirely an anatomic one, a prediction of the pathologic findings expected after death. Just as little was known of the physiology of the normal or abnormal heart or circulation, so the cardiac diagnosis failed to express the functional or physiologic capacity of the heart of the living patient.

The beginning of our present century brought us knowledge of the mechanism of the normal and

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abnormal heart and the physiology of the circulation. The work of Mackenzie, Lewis, Wenckebach, Peabody, and others taught us to ask first, not "What does the heart look like?" but "What is the heart doing?" We began to understand cardiac decompensation, and it became necessary to include in our diagnosis heart function as well as anatomic change.

But as we recognized the hopelessness of changing the stenosis of the valve or reducing hypertrophy of heart muscle, and as we saw the inadequacy of our therapeutics to restore the normal function of the heart, we sought clearer knowledge of the causes of heart disease, hoping to find means of preventing or arresting it.

MODERN-DAY DIAGNOSIS

So today a complete diagnosis demands a statement of its etiology, the structural changes, and the physiology and function of the heart. However incomplete our present knowledge of the causes of heart disease, too much stress cannot be laid upon the importance of such etiology as there lies our best hope for the individual patient and the advancement of cardiology.

In conformity with this modern concept of the proper diagnosis of heart disease, the American Heart Association has adopted a new classification. With minor modifications<sup>1</sup> this has been accepted by most cardiologists and cardiac clinics in the United States and by the medical departments of the Army and Navy. Its increasing use has aided in the collection of data. Its various headings need little explanation. It stresses the inadequacy of such diagnoses as "aortic regurgitation" unless the cause of the valve defect and the function of the heart be added or a diagnosis of "cardiac decompensation" unless the etiology and structural changes be included. It is, of course, obvious that in some patients more than one cause may be operative, as in the patient with rheumatic mitral stenosis who develops hyperthyroidism. The structural lesion present may indicate the etiology, as in the case of mitral stenosis which is nearly always rheumatic in origin. Or the etiology may predict the structural changes, as in the syphilitic type of disease. The group labeled "etiology unknown" is important in emphasizing that it is preferable to so state and thus keep searching for a cause rather than to simply note the anatomic lesion and consider the case a closed book.

The group of cases associated with general systemic disease includes a number of more or less distinct etiologic types corresponding in general to the old term "chronic myocarditis." This latter term is being gradually discarded as insufficiently explanatory and pathologically incorrect. As Christian, who has championed the phrase, points out<sup>2</sup> there may, even microscopically, be no inflammation of the heart muscle.

The relative frequency of the different etiologic types varies in different parts of the world and even in different sections of our own country. In this Rocky Mountain area, as in most of the

TABLE 1.—*Etiology of Heart Disease*

	Utah 700 cases	New England 3000 cases	Virginia 300 cases
Rheumatic .....	42.27%	31.8%	21.98%
Arteriosclerotic .....	21.57%	28.8%	45.66%
Hypertensive .....	13.13%	23.6%	45.98%
Hyperthyroid .....	9.13%	2.26%	3.66%
Syphilitic .....	.85%	3.18%	11.0%
Unknown etiology .....	6.14%	2.7%	2.33%
Hypothyroid .....	.14%	0.02%	
Subacute bacterial endocarditis .....	.28%	1.5%	
Acute bacterial endocarditis.....	.14%		
Congenital .....	.86%	1.2%	1.0%
Toxic .....	.43%	.13%	
Anemic .....	.28%	.05%	
Angina pectoris .....	8.4%	11.7%	9.33%
Coronary occlusion .....	.28%	2.3%	
Auricular fibrillation .....	8.7%	12.5%	
Cardiac neurosis .....	13.85%	10.1%	Not considered

Note: Some cases in each group have more than one etiology.

northern United States, the rheumatic is the most numerous group. It appears from my figures that it is even more frequent than in Boston or Virginia. In such a semi-southern state as Virginia<sup>3</sup> it is considerably less frequent than in New England,<sup>4</sup> and if one goes about the wards of the Charité Hospital in New Orleans, one sees a preponderance of syphilitic cases over rheumatic. In this connection, I was told by a physician practicing in Central Africa that there rheumatic fever and rheumatic heart disease are infrequent. In this Rocky Mountain area it appears that the thyroid type is relatively frequent and the syphilitic type infrequent.

PROCEDURES IN DIAGNOSIS

In discussing the method of diagnosis of a given case, I wish to consider principally those procedures most frequently neglected with resultant error or those regarding which present-day opinion differs from that of the past. For simplicity's sake let us follow the patient through the logical order of examination.

In the first place, we observe the approaching patient and, if we have seeing eyes, can learn much before a word has been spoken. Physicians of the older generation are often better observers than those of the younger generation with the overemphasis in their training of laboratory procedures. There is the unsmiling type who carries the weight of the world on her shoulders, usually a neurotic; the thyroid type whose knees are never still, the hypertensive type who sits on the edge of the chair and moves as if in response to a starter's gun. Even in the acutely ill, the general appearance may give valuable evidence for or against a specific cardiac diagnosis. A short time ago I saw a patient complaining of extremely severe precordial and substernal pain unrelieved by a quarter grain of morphin given an hour before. Of course one thought of angina pectoris or coronary artery occlusion, but when one noted that he writhed around in bed and even got up on his hands and knees, one felt fairly certain that neither of these could be the diagnosis, since in either the patient tends to remain quiet—to splint himself. The true diagnosis proved to be tabetic crisis. I do not mean to advocate "snap-

shot" diagnosis, but to suggest that the use of instruments of precision need not preclude the use of the eyes.

Then, as the patient tells us of his symptoms, we try to find the circumstances, psychic, physical or infectious, preceding their onset. The elicitation of psychic trauma preceding onset is most difficult but exceedingly important, not only in leading to a diagnosis, but later in determining treatment. Among the present series was one, all of whose symptoms dated from a doctor's examination, one from the first knowledge of her husband's infidelity and, of course, the usual ones due to war experience.

If cardiac disease is suspected, the patient is likely to complain of dyspnea, palpitation, or precordial pain. Not only must we determine the conditions producing these symptoms, but must realize that one or all of these may be symptoms either of organic cardiac disease, of cardiac neurosis, or of disease entirely apart from the heart such as tuberculosis or anemia. According to our records, patients without any diagnosable heart disease admit dyspnea almost as frequently as the cardiacs.

In the minds of the laity, dizziness, fainting, or numbness are considered symptoms of heart disease. As a matter of fact, in young people these symptoms are seldom truly cardiac but rather result from neurosis or extracardiac disease.<sup>5</sup> In older persons, however, they may be significant.

TABLE 2.—Symptoms in Three Groups of Cases

Symptom	Valvular 100 cases	Neurosis 50 cases	Valvular and Neurosis 23 cases
Dyspnea .....	62%	76%	91%
Palpitation .....	44%	86%	91%
Precordial pain .....	20%	52%	52%
Dizziness .....	7%	40%	74%
Fainting .....	3%	26%	34%
Numbness or tingling .....	4%	18%	48%

As we bring out these and other symptoms, we must observe whether the patient puts them together in a logical manner. There was a girl, for example, who had been diagnosed as having valvular heart disease. The history showed that she could dance all evening without dyspnea or palpitation, yet in the home slight exertion was said to produce both. Such illogical combinations should cast doubt upon the presence or significance of organic cardiac disease.

The most difficult symptom to evaluate is precordial pain in persons over forty years of age. Even in mild degree or in the atypical types where all the pain is abdominal rather than precordial, it may be the only symptom of angina pectoris and may predict a sudden death. Or precordial pain may be unrelated to the heart but rather the result of gastric disease or other pathology. Only the most careful description of the pain and the fitting of the symptom to physical and instrumental examination may serve to determine its significance.

After securing such a history of the present illness, we delve into the past history, searching

particularly for a cause for possible heart disease: rheumatic fever, thyroid disease, syphilis, past hypertension, etc. The history of such disease will later give point to our physical examination. Finally we bring out any other facts about the patient's past or present health. Even seemingly remote symptoms, apparently unrelated to the heart, may give the clue to a correct diagnosis. The cardiologist who is only a cardiologist might easily err through not realizing this point. Let me illustrate.

A woman of forty-one was referred to me for heart examination with particular request for x-ray and electrocardiographic studies, as ordinary examination left the nature of the condition in doubt. For eight to ten months she had complained of weakness, shortness of breath, and periodic blueness of the lips and cheeks. Except for headaches there were no other complaints, and the history revealed none of the usual causes for heart disease. She denied taking any medicines or drugs. Examination of the heart revealed no abnormality; it was noted that the patient breathed rapidly at rest and that the lips and cheeks were slightly bluish in color. Exercise or deep breathing caused this cyanosis to disappear. As the only other presenting symptom, inquiry was directed to her headaches and, after some questioning, it appeared that to relieve them she had been taking bromoseltzer for months, averaging the equivalent daily of five to forty grains of acetanilid. This she had not thought of as a medicine or drug. X-ray and electrocardiogram were unnecessary; all symptoms disappeared a few weeks after discontinuance of the bromoseltzer.

PHYSICAL EXAMINATION

We proceed to the physical examination. Not long ago, as a relic of the period of overemphasis of auscultatory signs, it was too commonly the custom to immediately use the stethoscope, often through a small opening in the shirt or through a layer or two of clothing. Fortunately the day of such "vest-button diagnosis" is past. We get the patient's chest uncovered and use our eyes first. We look for the apex impulse and abnormal pulsations or retractions. With the patient reclining, we observe the degree of filling of the veins of the neck, a simple and valuable indication of the function of the right ventricle. As I check over some of my own and others' mistakes, I find failure to do these things is a fairly frequent source of avoidable errors.

A few years ago a man of fifty-nine, applying for insurance, was referred to me by the home office for examination. He had been passed by a capable medical examiner as a first-class risk, but a nonmedical report to the company had cast doubt on this. As is usual in insurance examinations, the man denied all cardiovascular symptoms. The apex impulse was in the ordinary position; an ordinarily careful examination revealed no murmurs anywhere over the cardiac area. Except for accentuation of the aortic second



sound, the heart tones were of normal quality. There was no palpable thrill, but inspection revealed a visible pulsation in the first and second left interspaces, and careful percussion increased supracardiac dullness. With these findings as an indication, a faint aortic regurgitant murmur was discovered. There was no murmur over the aneurysm. X-ray confirmed the diagnosis of aortic aneurysm. In this case several of the cardinal symptoms were lacking and inspection of the chest was the procedure that led to diagnosis.

By careful palpation and percussion of the heart in patients who do not have too thick a chest wall it is possible to determine heart size with fair accuracy. Through haste or carelessness these procedures are often neglected and error follows. In one of my cases, a woman with indefinite cardiac history and symptoms, good heart sounds and no murmurs, I failed to recognize the presence of heart disease before an x-ray examination at a later date revealed the trouble. She was one of those women who are resistant to properly uncovering the chest, and I had percussed the heart outline so carelessly I had failed to recognize a considerable degree of cardiac enlargement. Not long ago a young man was referred as having an acute surgical abdominal condition because the physician had failed to outline by percussion a massive pericardial effusion.

At last our magic stethoscope appears and we proceed to search for murmurs. It has been said that the invention of the stethoscope has done more harm than good for cardiac diagnosis. In watching Sir Thomas Lewis work in London last year, I noted that a large percentage of his diagnoses were correctly made before use of the stethoscope. The significance of the various murmurs is too well known to justify discussion here. Let me, however, point out the changing attitude toward systolic murmurs and particularly toward the apical so-called mitral systolic murmur. Systolic murmurs at the base are usually functional. More and more there is a tendency to disregard apical systolic murmurs unless associated with the diastolic murmur of mitral stenosis, or with enlargement of the heart, or unless they follow recent rheumatic infection. If by ignoring many such murmurs we miss a few cases of organic mitral regurgitation, such lesions are usually unimportant and we do not do as much harm as by producing fear disability in many by falsely diagnosing heart disease on the basis only of a systolic apical murmur. May I illustrate with a case?

A woman of thirty-five had been helping care for a neighbor suffering from heart disease. Thinking it might be well to make certain of her own heart she went to a doctor for examination. Presumably only on the basis of a systolic apical murmur, she was informed that she had "leakage" and was advised to be careful. Following this she developed dyspnea and palpitation for the first time. A month or so later the neighbor died and the patient's symptoms became more pronounced. She was given digitalis without improvement. Two months later her father died suddenly of heart disease. The patient soon became so dysp-

neic that she was confined to bed. At the time I first saw her she was certain that if she raised up suddenly in bed it meant sudden death. Each night members of the family sat up with her "waiting for the end." She had no organic heart disease, but a cardiac neurosis suggested by a physician and accentuated by psychic trauma. She is now back to normal activity.

Richard Cabot, in reviewing 1906 cardiac cases found at autopsy, reports "seven cases of that rare condition, mitral regurgitation," emphasizing the infrequency of this lesion as an isolated condition.

From the contrary point of view many patients with serious heart disease present no murmurs. In Vienna much emphasis is still laid upon auscultatory signs and, by their correlation with the abundant autopsy material, surprisingly accurate anatomic diagnoses are made, but often at the expense of an interest in the more important function of the heart.

Finally, we do a careful general physical examination to make sure that the supposed heart symptoms are not due to some condition outside the heart. An example of this is a recent case, previously diagnosed as heart disease unrelieved by rest and digitalis. Examination showed little or no evidence of heart disease, but the back of the lungs, which had not been previously examined, showed a massive right hydrothorax, later proved to be the result of a mediastinal tumor rather than heart disease.

#### OTHER AIDS IN DIAGNOSIS

Blood pressure and urine examinations need no comment. But our diagnosis may still be in doubt and we seek the aid of the x-ray and electrocardiograph. These two instrumental aids particularly characterize the diagnostic advancement of our own century. But, like all instruments, they may be misused or misinterpreted. Of course fewer errors would be made if all cases had both x-ray and electrocardiographic examination, but in general practice this is not practical because of its cost. So let us try to judge just what information may be expected from these procedures. The majority of cases of rheumatic valvular heart disease can be sufficiently accurately diagnosed without their aid. It is particularly in heart disease of doubtful etiology and in heart disease associated with general systemic disease—the chronic myocardial type—that these instruments are of value, sometimes indispensable.

The electrocardiograph, like most instruments, has gone through phases of overenthusiasm and undervaluation, and is only gradually assuming its rightful place. It records the electrical phenomena associated with the heart beat. It determines with certainty the meaning of the various types of abnormal mechanism. To consider only a few of its practical applications, it is the only certain means of differentiating between such irregularities as auricular fibrillation from premature beats, or premature beats from partial auriculoventricular block or sinus arrhythmia. As

the treatment is different in these different irregularities and the prognostic importance of each different, their distinction is an important and practical one. Likewise, without the record, it is often difficult to distinguish between the three types of rapid regular hearts, sino-auricular tachycardia, auricular flutter and paroxysmal tachycardia, or between the two types of slow regular hearts. In each of these conditions the therapeutic indication is different. The electrocardiogram gives useful information for the use or avoidance of digitalis and serves as the safest means of following the course of quinidin therapy. Its greatest value, however, lies in the evidence it gives of myocardial or coronary artery changes. In these conditions it may give the first or only evidence of disease and may furnish valuable prognostic data.<sup>7</sup> Intraventricular block or certain T-wave changes have a definite significance. It must, however, be recalled that it is possible to have a normal electrocardiogram despite serious heart disease. The instrumental findings are not a diagnosis in themselves, but only data to be used in making that diagnosis.

By means of the x-ray we may determine more accurately the size and shape of the heart outline and get reasonably accurate information of the relative size of the different chambers and of the aorta, information difficult or impossible to secure by any other means. Such information is not often necessary in rheumatic valvular disease in persons with thin chest walls, but if the chest wall is thick, or if aortic, coronary artery or myocardial disease is suspected, the x-ray examination may be indispensable. Of the methods of x-ray examination, fluoroscopy is the most valuable. For heart measurements it should be supplemented by an orthodiagram or a seven-foot plate.

When all our data, clinical and instrumental, have been assembled, our cardiac diagnosis will usually be evident. Occasionally, however, despite every possible examination, we are still in doubt whether or not an organic lesion of the heart exists. In such cases it was formerly the custom to tell the patient that he had a slight degree of cardiac disease, consoling ourselves with the thought that moderate restriction of activity would do no harm if it did no good. Today, after the Great War has taught us the frequency and disabling seriousness of cardiac neurosis, we feel that in such cases it is better to keep our doubt to ourselves and not inform the patient that he has heart disease—to give the heart the benefit of our diagnostic doubt.

Or when a positive diagnosis of heart disease has been made we should ask ourselves if this condition explains all the symptoms. I recall in this connection the case of a woman of forty who lay in bed complaining of great dyspnea, extreme weakness and fear of imminent death. Examination revealed a markedly enlarged heart—heart disease of unknown etiology, but there was no objective evidence of congestive or anginal failure. It soon became apparent that, while she had defi-

nite organic heart disease, most of her symptoms were due to a superimposed anxiety neurosis, which fact very greatly modified the treatment.

Finally we come to the question of the functional capacity of the heart which is more or less synonymous with prognosis and upon which treatment depends more than it does on the anatomic changes. To the patient, too, the outlook is of more importance than is some valve change which he does not understand.

The cause of the heart disease—the etiologic type—has great bearing on the prognosis. Obviously if the cause can be removed, as in thyroid heart disease or certain of the toxic types, the outlook is good. Syphilitic heart disease is usually progressive despite antiluetic treatment, and if congestive failure occurs, it is not likely to improve under digitalization. In the arteriosclerotic and hypertensive types prognosis depends not only upon these conditions, but upon kidney and blood-vessel pathology.

The character of murmurs seems to have little bearing on function or prognosis. Provided that there is not a thick chest, the character of the heart sounds is a fair indication of prognosis. The degree of cardiac enlargement is perhaps the most valuable single clinical sign with the exception of the arteriosclerotic group, where enlargement is not at all essential for a poor outlook.

Of the irregularities, premature beats, as recently shown by White in a large series of cases, do not materially modify the length of life while auricular fibrillation definitely shortens life. Reference has already been made to the significance of certain types of heart block determined by the electrocardiogram.

Tests of function, such as vital capacity, response of blood pressure and pulse to exercise, do not seem as useful to me as the patient's response to activities more nearly approximating his normal mode of life.

The bearing of occupation on prognosis is obvious.

In all cardiacs the length of life is profoundly modified by acute or chronic focal infections and his ability to avoid or eliminate them.

Intermountain Clinic.

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## THE BLOOD PICTURE IN HODGKIN'S DISEASE\*

By ERNEST H. FALCONER, M. D.  
San Francisco

DISCUSSION by Ernest S. du Bray, M. D., San Francisco;  
John J. Sampson, M. D., San Francisco; Munford Smith,  
M. D., Los Angeles.

SINCE the publication of Bunting's work in 1911<sup>1</sup> and 1914,<sup>2</sup> analyzing a series of blood counts in Hodgkin's disease, our interest has been directed toward the importance of the blood picture in this disease. We use the term "Hodgkin's disease" in this paper instead of the newer nomenclature because of the fact that long usage distinguishes this disease from lymphosarcoma. Bunting's work tended to show that it is possible to divide cases of Hodgkin's disease into two distinct groups, according to the differential count of the leukocytes. The first group, consisting of cases of one year or less duration, showed a normal or decreased percentage of polymorphonuclear neutrophils. The second group, those cases of longer than one year duration, showed a leukocytosis, running in one instance to 100,000 leukocytes per cubic millimeter. The leukocytosis present was found to be made up of a neutrophilic percentage between 72 and 90 per cent. The most striking feature of the differential count was the increase in the transitional leukocyte, a large mononuclear cell with indented, irregular nucleus and fine azurophil granulation with Wright's stain. These cells were found increased in both groups. The lymphocytes might be increased in the very early cases, but tended to decrease in the later cases, varying from 7.6 to 3.4 per cent. The eosinophil count was found to be variable, never high except in rare cases. The basophils were increased in early cases, later tending to disappear from the circulation. Platelets were always increased in both groups.

The analysis in this report is patterned after Bunting's analyses. The chief reason for publishing these data is to again call attention to the value of carefully made blood counts in this disease and to emphasize the fact that an increase in the eosinophilic percentage in the differential count is not an important and a constant feature in the blood picture. Many students and practitioners hold this idea, apparently having been taught it at some time in their careers. There are certain exceptional cases of Hodgkin's disease that show a remarkable eosinophilia, as, for example, the following case from the male medical ward in the University of California Hospital. An average of ten blood counts shows this composite leukocyte and differential count: Red cells, 4,874,000; hemoglobin, 88.3 per cent; white blood cells, 43,875; polymorphonuclear neutrophils, 14; polymorphonuclear eosinophils, 65.5; polymorphonuclear basophils, 1.2; lymphocytes, 11.3; and

monocytes, 8. One or two of the differential counts in this individual showed as high as 80 per cent eosinophils. There was an extensive erythema and infiltration of the skin in this patient.

### ANALYSIS OF TABLES

An analysis of Table 1 shows twenty cases on whom ninety-three blood counts were made. There are twenty-one composite counts entered in this table, but Case No. 26716 appears twice, having two sets of blood counts in two different entries. The average hemoglobin and average red cell count for the group shows a moderate secondary anemia. The average white count is 11,728, slightly above the usual normal, but still within the higher limits of normal. The polymorphonuclear eosinophil, basophil, and lymphocyte ratios are within normal limits, but the monocytes, 10.2 per cent, are increased. The large mononuclear cell and the transitional are grouped together in this study under the term "monocytes." We have been unable to find any definite criteria to differentiate between these two types of cells, so we group them under the term "monocyte." The normal percentage of monocytes is taken as about 6 to 8 per cent of all the leukocytes.

Table 2, comprising cases of more than one year's duration and up to thirteen years, in one case shows an average white cell count of 14,350 white cells per cubic millimeter. This count is an average of eighty counts made in twenty patients. In this group it will be noted that the polymorphonuclear ratio averages 68.4 per cent, not much higher than Table 1. A few cases with low neutrophil count serve to bring down the percentage. The eosinophil count averages 2 per cent, the lymphocyte count 20.7 per cent, and monocytes 8.5 per cent. The monocyte count is only slightly increased in this group.

Table 3 is composed of two small groups divided as to time limits into Group "A," one year or less; and Group "B," more than one year. These cases have had very carefully performed white blood counts with the differential count checked by the author. These groups are small, but are worth recording as several counts have been made in each case and a composite average recorded in the table. It is interesting to note that in Group "A," of one year or less duration, the white cell count and differential is within normal limits with the exception of the monocytes, which are increased. In Group "B," cases of more than one year duration, the white cell count averages 11,500, a slight increase with an increase in the percentage of polymorphonuclear neutrophils at the expense of a decrease in the lymphocyte percentage. The monocyte count is 10 per cent, the same as Group "A." The platelets and reticulated cell counts have been recorded in Table 3. The platelets are not particularly increased in the averages shown. By the method used<sup>3</sup> 300,000 falls well within the normal range. The reticulocyte count in Group "A" indicates that the marrow is fairly active in the early cases. In Group "B" it appears to indicate some "falling

\* From the Department of Medicine, University of California Medical School, San Francisco.

<sup>3</sup> Read before the General Medicine Section of the California Medical Association at the fifty-eighth annual session, Coronado, May 6-9, 1929.

TABLE 1.—Cases of Apparent Duration Under One Year

Sex and Case No.	Age	Diagnosis by Biopsy or Autopsy	Apparent Duration of Disease	Number of Blood Counts	Hgb.	Erythrocytes	White Blood Cells	N	E	Bas.	L	M	Plates.
M 8127	17	B. A.	1 yr.	4	81	3,630,000	17,510	82	1.2	.3	9.	7.4	
M 2869	33	B.	6 mos.	2	70	5,200,000	9,700	85	3.		8	4	Number appears normal
F 8950	54	B.	8 mos.	2	85	4,280,000	9,300	75	1.	.5	19	4.5	
M 13876	22	B. A.	1 yr.	9	50	3,600,000	12,830	20	.7	.5	77.2	1.6	
M 18468	42	B.	6 mos.	6	47	3,130,000	10,400	80	1.	.1	15.7	3.2	
M 12699	50	B.	7 mos.	3	87	4,960,000	6,000	52	7.	.7	26.3	14.	
M 25746	41	B.	8 mos.	5	71	3,600,000	6,100	74	1.2	.2	15.	9.6	
M 25751	34	B.	5 mos.	3	90	5,020,000	7,150	51	2.	.7	37.	9.3	
M 22992	40	B.	9 yrs.	2	75	3,952,000	9,150	79	2.	0.	14.	5.	
M 10851	29	B.	4 mos.	1	85	4,352,000	13,800	46	14.	0.	25.	15.	
M 33396	23	B. A.	3 mos.	11	62	3,517,000	17,400	85.5	0.	.1	8.3	6.1	592,000
F 12909	33	B. A.	1 yr.	2	95	4,760,000	5,650	75.	1.	0.	19.	5.	
M 16599	39	B.	10 mos.	9	76.5	3,898,000	7,000	80.	3.1	.2	9.	8.7	
F 46234	62	B.	9 mos.	1	80.	4,430,000	17,840	85.6	0.	0.	9.	5.4	
F 23656	65	B.	6 mos.	2	94.	5,420,000	7,800	67	1.	.7	26.	5.3	
M 26716	21	B. A.	11 mos.	5	48.5	3,724,000	44,250	88	2.2	.2	4.2	5.4	
M 26716	21	B. A.	1 yr.	4	49	3,095,000	84,960	89	3.2	0.	4.5	3.3	
M 13760	24	B. A.	6½ mos.	11	50	4,080,000	33,300	89.2	.2	0.	4.9	5.7	
M 43370	47	B. A.	4 mos.	3	89	4,625,000	5,640	63.3	2.	.1	23.3	11.3	
M 20334	42	B.	5 mos.	2	83	4,900,000	5,400	53	4.5	1.	28	12.5	
M 8226	22	B.	8 mos.	6	48	3,549,000	9,220	65.2	1.5	.3	24.	9.	
				93	72	4,200,000	11,728	60.4	2.4	.4	26.6	10.2	

B—Biopsy      A—Autopsy      N—Neutrophils      E—Eosinophils      Bas—Basophils  
L—Lymphocytes, large and small      M—Monocytes which include large mononuclears and transitionals

off” in the regenerative power of the bone marrow in those cases beyond one year in duration.

SUMMARY

The results of our blood studies in Hodgkin's disease conform in a general way to the results and conclusions worked out by Bunting several years ago. In our results it is difficult to be sure of the duration of the disease from the history obtained from the patient. In Table 1 there are undoubtedly some inaccuracies with respect to the duration of the disease, as the onset is nearly always insidious and the patient is not aware of the disease until it has been progressing for several weeks. It is very important to realize that occasionally leukemia-like blood pictures may occur in Hodgkin's disease, as seen in this patient at the age of thirty-six who entered the male medical ward at the University of California

Hospital from the medical clinic with a leukocyte count of 36,200; polymorphonuclears, 14 per cent; lymphocytes, 86 per cent. From his history the duration appeared to be about eight months. His blood count after entry to the hospital was: hemoglobin, 75; red blood cells, 4,460,000; white cells, 25,000; polymorphonuclears, 35; large lymphocytes, 2; small lymphocytes, 60; and monocytes, 3 per cent. This patient had a paraplegia, and an x-ray film of the spine showed nodules in one of the lower dorsal vertebrae.

CONCLUSIONS

This analysis substantiates the idea that later in the disease, beyond the first year, the leukocyte count tends to become increased, with an increase in the polymorphonuclear leukocytes. Also there is an average and fairly constant increase



TABLE 2—Cases of Apparent Duration of One Year or More

Sex and Case No.	Age	Diagnosis by Biopsy or Autopsy	Apparent Duration of Disease	Number of Blood Counts	Hgb.	Erythrocytes	White Blood Cells	N	E	Bas.	L	M	Plates.
F 21763	54	B. A.	3 1/2 yrs.	10	50	3,215,000	11,196	85.	2.7	.9	1.8	10.6	
M 23730	22	B.	3 yrs.	5	60	3,591,000	5,240	70.	1.	.0	20.6	8.4	
F 47044	45	B.	4 yrs.	1	79	4,100,000	8,680	57.	7.	2.	26.	8.	
M 47336	26	B.	18 mos.	1	65	4,010,000	16,850	16.	4.	0.	72.	8.	
M 47322	46	B.	14 mos.	1	80	4,150,000	9,400	72.	2.	0.	19.	7.	
M 24678	10	B. A.	18 mos.	5	83	4,606,000	15,740	80.	.7	.3	10.	9.	
M 14490	24	B. A.	14 mos.	11	50	4,084,000	33,000	89.	.2	0.	5.	5.8	
F 16034	25	B. A.	3 yrs.	1	65	3,000,000	10,600	66.	0.	0.	24.	10.	
M 38003	15	B. A.	6 yrs.	1	35	2,240,000	35,500	89.	0.	0.	5.	6.	
M 38427	21	B. A.	21 mos.	2	42	2,943,000	22,500	82.5	2.5	0.	10.	5.	
F 31786	30	B.	8 yrs.	5	75	4,010,000	10,730	81.	2.5	.2	11.	5.3	
M 46455	8	B. A.	2 yrs.	8	37	2,041,000	5,600	87.	.4	0.	6.	6.6	405,900
M 10391	47	B.	2 yrs.	5	50	3,141,000	10,100	66.	4.6	.6	22.	6.8	
F 13704	37	B.	16 mos.	2	65	4,320,000	15,900	86.5	.5	.5	9.5	3.	
F 1521	27	B.	1 1/2 yrs.	1	55	4,488,000	14,800	60.	1.	0.	30.	10.	
F 598	52	B.	5 yrs.	1	90	5,240,000	12,000	47.	8.	0.	36.	9.	
M 33735	40	A.	13 yrs.	7	61	3,220,000	20,900	83.	0.	0.	13.5	3.5	
M 25556	43	B.	1 yr. 9 mos.	10	60	3,200,000	3,500	57.6	1.4	1.	25.	15.	432,000
M 16219	22	B.	4 yrs.	2	90	4,500,000	11,300	22.5	.2	.5	62.	15.	
F 16980	35	B.	5 yrs.	1	75	3,592,000	13,500	72.	5.	0.	6.	17.	
				80	63	3,684,550	14,350	68.4	2.	.02	20.7	8.5	

B—Biopsy      A—Autopsy      N—Neutrophils      E—Eosinophils      Bas—Basophils  
L—Lymphocytes, large and small      M—Monocytes which include large mononuclears and transitionals

in the mononuclear cells. For some reason our platelet counts are not high, as other authors have found them. This is a matter for further investigation. The eosinophil count averages about normal or below but may occasionally be very high, reaching in one instance 80 per cent of the total leukocytes.

384 Post Street.

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DISCUSSION

ERNEST S. DU BRAY, M. D. (490 Post Street, San Francisco).—I think it is safe to say that Doctor Falconer has brought together in the foregoing paper

the largest and most completely studied group of cases of Hodgkin's disease, from the blood standpoint, that has appeared in the American medical literature since the classic contributions of Bunting. It is rather significant that this study confirms Bunting's work in the chief essentials. Although it is true the blood picture alone cannot be relied upon absolutely to make the diagnosis in a border-line case, nevertheless it is of value in offering strong corroborative evidence in cases of general glandular enlargement. Such conditions as lymphosarcoma, tuberculosis, leukemia, and infectious mononucleosis are among the frequent confusing disturbances that come to mind in the differential diagnoses of glandular enlargement. To be sure the biopsy is nowadays resorted to early, but at times even the pathologist hesitates to go on record positively from a study of the gland tissue.

In a general way it can be said that Hodgkin's disease usually presents a secondary anemia which increases as the disease progresses. The white blood count may be normal early in the course of the illness, but later a moderate leukocytosis between 10,000 and 20,000 usually appears. The polymorphonuclear neutrophils gradually increase and are found

TABLE 3.—Groupings Based on Time Limits\*

Sex and Case No.	Apparent Duration of Disease	White Blood Count	GROUP "A"—Less Than One Year						
			N	E	B	L	M	Plates.	Retic. Reds
F 1	1 yr.	5,650	73	2	0	13	10	312,000	2.
F 2	10 mos.	6,400	50	6	1	34	9	160,000	1.2
M 6	11 mos.	7,850	80	1	0	12	7	420,000	2.6
M 4	1 yr.	10,400	77	1	0	13	9	260,000	4.4
F 8	8 mos.	9,000	36	2	1	44	17	268,000	.8
M 9	1 yr. 11 mos.	6,600	65	3	0	20	12	368,000	.6
M 13	7 mos.	9,550	73	1	0	23	3	480,000	2.
		7,921	65	2	.3	23	10	324,000	2.3
			GROUP "B"—More Than One Year						
M 3	18 mos.	9,900	80	0	0	8	12	325,000	.8
M 5	2 yrs.	6,350	65	1	0	10	24	184,000	.2
F 7	4 yrs.	9,450	70	2	0	22	6	310,000	.4
M 10	2 yrs.	6,920	70	2	0	23	5	254,000	1.2
M 12	1 yr.	32,000	79	3	1	10	7	532,000	3.7
M 11	3 yrs.	9,600	80	3	0	10	7	164,000	1.2
M 14	1 yr. 4 mos.	6,300	72	1	0	19	8	355,000	.0
		11,503	74	2	.1	15	10	303,428	1.1

\*Special counts checked by author done in the Hematology Clinic.  
N—Neutrophils      E—Eosinophils      Bas—Basophils      L—Lymphocytes, large and small  
M—Monocytes which include large mononuclears and transitionals      Plates.—Platelets      Retic. Reds—Reticulated red cells

commonly between 70 and 90 per cent, with an absolute increase in the transitional cell, which Doctor Falconer includes in his monocyte group. Bunting, it will be recalled, emphasized the absolute increase in the transitional cell even in the early cases.

Most observers have noted a definite increase in the platelets, but as the exact numerical determination of platelets depends considerably on the method used, this may partially account for this apparent discrepancy in that the platelets in this present study appeared about within normal limits. Another feature, with reference to the platelets that some observers have noted, was the conspicuous presence of giant platelets in considerable numbers. The presence of marked eosinophilia has undoubtedly been overstressed as an important feature of the blood picture. It may be said, however, that it does occur, particularly with either one of two conditions existing, viz.: widespread skin involvement or a necrosis in lymph glands.

In conclusion, I would like to compliment Doctor Falconer on the concise and yet complete way the above study is presented. He has again shown that the Oslerian method of an intense study of a single phase of a well-known disease is not without profit.

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JOHN J. SAMPSON, M. D. (490 Post Street, San Francisco).—Doctor Falconer, as Doctor du Bray has pointed out, has rendered a genuine service in stabilizing our knowledge of the changes that take place in the blood in Hodgkin's disease.

I believe that there are some remarkable variations in morphology that are worthy of mention, in addition to the changes in total and relative numbers of blood cells that Doctor Falconer summarizes. The monocytes (large mononuclear leukocytes or endothelial leukocytes), in my experience have often been found to assume the same forms frequently seen in subacute bacterial endocarditis, namely, increase in size, vacuolization, and definite large pseudopod formation.

The platelets, especially during the phase of the disease in which they are increased in number, have been observed to be increased in size, occasionally as much as twenty microns. Such platelets are more liable to be elongated along a single meridian.

There is still a difference of opinion as to recognition of Hodgkin's disease as a separate entity in contrast to its possible classification in a general lymphoblastoma group. Transitional cases occasionally appear which seem to link it with either lymphosarcoma on one extreme or lymphatic leukemia on the other.

I believe it is wise to withhold the decision as to which of these conclusions may be correct, and therefore still reserve the possibility of interpreting these blood changes in another light than that they may be characteristic of Hodgkin's disease, as a distinct clinical entity.

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MUNFORD SMITH, M. D. (1105 Roosevelt Building, Los Angeles).—Doctor Falconer has presented a large, interesting group of cases of Hodgkin's dis-



case, thoroughly studied from the standpoint of the blood picture. It well illustrates that there is a slightly higher white cell count and increased polymorphonuclear neutrophil count in the older cases; also, that there is rarely an eosinophilia in Hodgkin's disease, which is an incorrect point of differentiation so frequently insisted upon.

At the time that this paper was presented to me I was particularly interested in the differentiation between Hodgkin's disease and tuberculous adenitis, having recently seen several cases where a question had arisen. I had made a partial survey of the literature, but had found nothing so well covered as in Doctor Falconer's paper. Biopsy still remains the method of choice to differentiate between several conditions which may be confused with Hodgkin's disease.

## SYSTEMIC BLASTOMYCOSIS\*

### REPORT OF CASES

By GEORGE D. MANER, M. D.

AND

ROY W. HAMMACK, M. D.

Los Angeles

DISCUSSION by W. T. Cummins, M. D., San Francisco; H. A. Wyckoff, M. D., San Francisco; Newton Evans, M. D., South Pasadena.

THE term "blastomycosis," in its broad sense, includes all diseases caused by yeast-like fungi, that is, fungi which appear in the lesions as round or oval cells, sometimes budding, but usually without mycelium. These fungi are generally called blastomycetes, and include members of several genera.

However, in this country the tendency has been to restrict the term "blastomycosis" to infection with *Blastomyces dermatitidis* (Gilchrist and Stokes) and there seems to be constant effort to designate otherwise infections with related but distinct organisms. This is particularly true in California, where infection with *Coccidioides immitis* is so frequently seen. While several cases of coccidioidal infection have been reported in the literature as systemic blastomycosis, they were so reported because the organisms were not differentiated, and the true nature of the infection was not recognized.

### CASTELLANI'S CLASSIFICATION OF BUDDING FUNGI

Castellani<sup>1</sup> has recently proposed a new classification of the yeast-like or budding fungi, based on the presence or absence of mycelium, and presence or absence of ascospores, which includes families of both Ascomycetes and Fungi imperfecti.

(a) Family Saccharomycetaceae, with budding cells, asci and ascospores, but no mycelium in culture.

(b) Family Endomycetaceae, with budding cells, asci and ascospores with mycelium in culture.

(c) Family Cryptococcaceae, with budding cells (blastospores), no asci and no mycelium in culture.

(d) Family Oösporaceae, with budding cells, no asci but mycelium in cultures.

He creates a new genus, which he calls *Blastomycoides*, under Family Oösporaceae, in which he places three species: 1. *Blastomycoides dermatitidis*, synonym—*Blastomyces dermatitidis* (Gilchrist and Stokes). 2. *Blastomycoides immitis*, synonym—*Coccidioides immitis* (Rixford and Gilchrist). 3. *Blastomycoides tularensis* (Castellani). He defines the genus *Blastomycoides* as: "Oösporaceae appearing in the lesions as large roundish cells from eight to twenty microns in diameter, or larger, with the protoplasm containing a number of well-marked granules or spherules, and with a membrane showing a well-defined double contour: in dextrose agar cultures a large amount of mycelium is present." There are slight cultural differences of the three species when grown on mannitol, glucose, lactose and galactose agar.

In justifying his reasons for placing *Coccidioides* in the above genus, he contends that "the spherules found in the large round cells are not ascospores, but are protoplasmic granules, and that in culture, when one of the organisms produces a bud, which later becomes a filament, the same granules are seen in the mycelium." He also states that *Coccidioides* grows in cultures as a saccharomyces type which reproduces by budding, and a filamentous type.<sup>2</sup> He moves the species *Coccidioides immitis*, genus *Coccidioides*, family Endomycetaceae, class Ascomycetes, to genus *Blastomycoides*, species *Blastomycoides immitis*, family Oösporaceae, class Fungi imperfecti.

Thus, he also moves *Cryptococcus dermatitidis*, synonym—*Blastomyces dermatitidis* (Gilchrist and Stokes) from genus *Cryptococcus*, family Cryptococcaceae to family Oösporaceae, genus *Blastomycoides*, species *Blastomycoides dermatitidis*.

We agree with Castellani on the value of a better classification, but do not feel that the species *Coccidioides immitis* should be grouped in genus *Blastomycoides*, even though it has cultural characteristics similar to others of this genus. He apparently has arrived at this classification of the organism wholly upon the cultural characteristics without regard for the generally accepted ideas of the morphology of the organisms in the lesions, that is, he does not agree with other observers on the method of reproduction of *Coccidioides* in tissues, viz., multiplication by endosporulation with complete absence of budding.

Therefore we feel that *Coccidioides immitis*, in spite of cultural similarity, is not sufficiently closely related to *Blastomyces dermatitidis* to be placed in the same genus.

The two cases which we report as generalized or systemic blastomycosis are caused by organisms of the species *Blastomyces dermatitidis* (Gilchrist and Stokes), or *Blastomycoides dermatitidis* (Castellani).

### NATURE OF BLASTOMYCOSIS INFECTION

Little is known of the source and manner of infection. In some cases the primary focus has

\* Read before the Pathology Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.

apparently been the lungs. In the majority of cases the disease is confined to the skin, but may enter the system from that location.

The lesion of cutaneous blastomycosis is fairly typical. It begins usually as a papulopustule which slowly enlarges, flattens down and forms crusts over the center. The surface becomes irregular and papillomatous, the edges elevated, firm and deep red. Extension may be in one or all directions. The histologic picture is characteristic. There is a large amount of carcinoma-toid overgrowth of epithelium, numerous intra-epithelial abscesses and abscesses beneath the epithelium, as well as granulomatous lesions which contain the organisms.

In systemic infections the lesions of the viscera resemble greatly those of miliary tuberculosis, but in the supporting tissues there is more tendency to suppuration and frequently burrowing abscesses are formed. The lungs are always involved, the spleen and kidneys usually, other organs less frequently. But the list of organs involved in the sum total of cases includes practically every tissue.

The microscopic appearance of the lesions closely resembles that of tuberculosis, but often differs from it in the larger numbers of polymorphonuclear leukocytes present, and in the presence of the parasite.

Clinically the disease may resemble tuberculosis in being a chronic febrile disease with pulmonary symptoms. However, its clinical manifestations are as variable as those of tuberculosis. In many cases multiple abscesses have appeared in various parts of the body with the symptoms of a chronic pyemia. These abscesses may rupture forming ulcers or sinuses. In several cases subcutaneous nodules were the first external manifestation of the disease, and followed systemic symptoms. In others, cutaneous blastomycosis has existed for some time before systemic symptoms appeared. The diagnosis depends upon the demonstration of the parasite in pus or tissues. The addition of 10 per cent sodium hydrate to pus tends to cause disintegration of the leukocytes, and causes the organisms to stand out clearly. The organisms have been found in the sputum and have been recovered from the blood stream.

Treatment of the systemic cases has been unsatisfactory. Many therapeutic agents have been used, but of these only potassium iodid seems to have been of any value. Even this has been successful in very few cases.

#### REPORT OF CASES

CASE 1.—The patient was a male, white, age thirty-five, an electrician. His first admission to the Los Angeles General Hospital was on January 13, 1920. He was first on the service of Doctor Lovejoy, later under Doctor Scholtz. Six or seven months before admission a pustule appeared on the chin; it was somewhat painful. It opened after being poulticed with "Denver mud," but continued to grow. Soon after the appearance of the first lesion others appeared. He was treated by a physician with iodine, scarlet red, and phenol at different times, but the lesions continued to grow.



Fig. 1.—Cutaneous lesions, Case 1

At the time of admission examination showed a well-developed man with no abnormal physical findings other than the lesions of the skin. There were five of these, one on the chin, one on the left eyelid, one on the right side of the neck, one on the left shoulder, and one on the fourth toe of the right foot. The lesion on the eyelid was 1.5 centimeter in diameter, elevated, with reddened edges, a small area of ulceration in the center covered by a crust. Conjunctiva was reddened and the eye somewhat painful. The other lesions were 3 to 4 centimeters in diameter, oval, elevated and partially covered by yellowish crusts. The edges were firm and reddish. Beneath the crusts was a little pus; the surfaces were deep red, irregular and somewhat papillomatous. A small piece of tissue removed from one of the lesions showed the typical microscopic picture of blastomycetic dermatitis. Attempt to culture the organism was unsuccessful. The blood Wassermann was negative.

Three days after admission the patient left the hospital but returned thereafter twice weekly for treatment. Treatment consisted of local applications of trichloroacetic acid, x-ray, and potassium iodid by mouth.

For some time there was marked improvement in the lesions. The lesion of the eyelid gave the most trouble, as it was hard to treat and was often painful.

On July 22 he was again admitted to the hospital complaining of general malaise, headache, weakness, and pain in left eye. Headaches were frequent, but there were no other signs suggesting meningeal irritation. The pain in the left eye was constant and later had to be controlled by morphine.

The day after admission his temperature was 103 degrees, pulse was 108, and respiration was 20 at 3 p. m. This was the highest temperature recorded. It averaged about 99 in the mornings and 101 degrees in mid-afternoon. Pulse was 80 to 100. He became gradually weaker and died August 29, 1920. On July 28 he had 14,000 leukocytes, 57 per cent polymorphonuclears, 37 per cent small mononuclears, 4 per cent large mononuclears, 1 per cent eosinophils,



and 1 per cent basophils. A blood culture taken July 27 remained sterile. Urine was normal.

*Autopsy.*—Autopsy was not obtained until July 31, nearly forty-eight hours after death. A summary of the report is as follows:

Body emaciated, postmortem discoloration of abdomen. Over the left eye are crusts and pus, the upper lid is completely destroyed, as also the median end of the lower, for a distance of about one centimeter. The cornea is opaque. On the left side of the lower jaw is a large ulcerated area five centimeters in diameter, extending from the mouth to the chin. This is covered with crusts and pus; edges are slightly elevated, the base fairly smooth. A thin layer of epithelium extends a short distance inward from the elevated edge. On the right side of the neck is a lesion eight by four centimeters; on the front of the left shoulder, one five by three centimeters; on the right fourth toe, one covering the dorsum—all similar to the one described.

The left lung is bound by numerous fibrous adhesions, the right is free. Palpation of the left lung revealed many shot-like nodules throughout. Otherwise the lung is soft. Posterior part is red, but not moist. The cut surface shows many small gray nodules two to three millimeters in diameter. Occasionally two or more of these are fused to form a larger nodule. There appears to be some increase in the connective tissue about the nodules where they are thickest, especially in the upper lobe. Bronchi contain mucopurulent exudate. Right lung is similar in every respect. Peribronchial lymph nodes are not enlarged.

No lesions are found in other organs.

The lung picture resembled closely a miliary tuberculosis. Cultures were made from the lung lesions, but only staphylococci were obtained. Microscopic examination of sections showed tubercle-like structures containing many giant cells. In these structures were found the parasites, small spherical bodies ten to twelve microns in diameter with double-contoured membranes. Occasional budding forms were found. The organisms were present both in the giant cells and lying free in the tissue.

**CASE 2.**—Negro, male, age thirty-four, occupation freight handler. Residence in Los Angeles County seven months. Previous residence, Louisiana and Arkansas.

Illness began in January of 1925 with chills and fever, weakness and progressive loss of weight. He had daily fever, was able to be up but not to work. On March 1 he became bedridden. Loss of weight

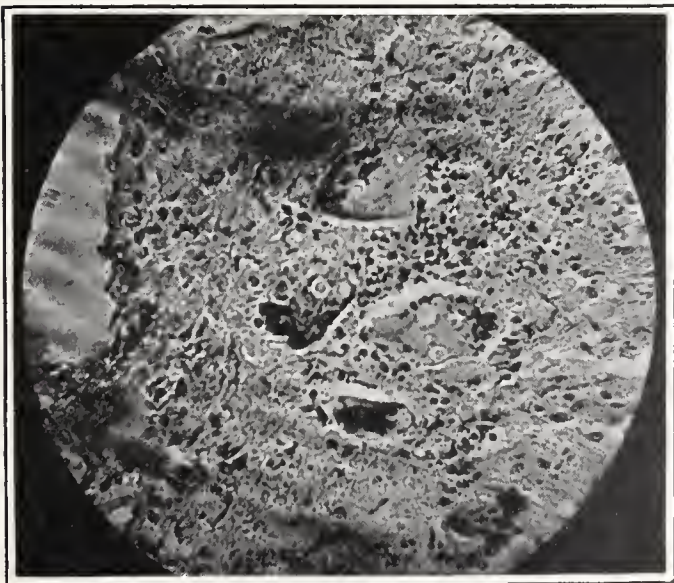


Fig. 2.—Section from lung showing organisms in giant cells

continued. On April 1 he noticed abscesses over right leg which were opened. Was admitted to hospital May 2, 1925.

Examination revealed a greatly emaciated, acutely ill patient, with temperature 101 degrees, pulse 128, and respiration 32. There was a punched-out ulcer on inner aspect of right heel, a discharging sinus in the middle third of inner aspect of right leg, and abscesses over the tuberosity of right tibia and upper third of outer surface of the right leg. Several healed scars over right leg. A large abscess over left shoulder. A verrucoid lesion on the bridge of nose and on left cheek. Physical examination of chest revealed signs suggesting both active and fibroid pulmonary tuberculosis. Pus aspirated from abscess of left leg showed budding blastomyces. Cultures of this gave a heavy, white, fluffy, mycelial growth. Sputum positive on one occasion for tubercle bacilli. Patient was given potassium iodid by mouth and neoarsphenamin intravenously with no improvement. He died June 19, 1925.

*Autopsy.*—Emaciated negro male. On left cheek a raised, encrusted lesion containing creamy gray pus; the scab is easily removed, leaving a red, granular and verrucoid surface. Similar lesion on bridge of nose. Irregular, encrusted, verrucous lesions over left shoulder and scapula, mid-portion of volar surface of left forearm, base of left thumb, and dorsal surface of base of left fifth finger. Small subcutaneous abscesses in anterior portion of left temporal region, medial surface of right forearm, left thigh and upper portion of left leg. Right ankle is swollen and presents several sinuses which extend into the joint. Partial destruction of talo-tibial joint capsule, and erosion of articular cartilages. Right elbow joint distended with fifty cubic centimeters of pus. Articular cartilages eroded.

Left pleural cavity completely obliterated with dense fibrous adhesions. Right, few adhesions at apex.

Right lung weighs 1320 grams, firm and diffusely nodular. Pleura presents numerous semitranslucent, miliary nodules. Hilar nodes enlarged, black, pigmented, but no nodules. The cut surface shows numerous small, gray, opaque and semitranslucent miliary nodules, more numerous in lower lobe. Anterior portion contains pneumonic patches. No cavities.

Left lung weighs 720 grams. Firm and nodular. Surface roughened with fibrous tags and miliary nodules. Hilar nodes enlarged, pigmented but no nodules. At the apex there is an irregular, outlined, solitary cavity four centimeter in diameter lined by a thin, fibrous wall and filled with sanguinopurulent material. Cut surface studded with nodules which are larger and more opaque than those in the right lung.

Kidneys are slightly enlarged. The surface, after stripping the capsule, is studded with a few small, yellow, opaque, miliary nodules. Organ infiltrated with amyloid.

No nodules found in other viscera.

*Microscopic.*—The lesions in the skin were characteristic of blastomycetic dermatitis with carcinoid overgrowth of epithelium and numerous intra- and subepithelial abscesses containing the round and budding organisms. Tubercle-like nodules in corium, organisms in giant cells and free among the tissue cells. Heavy eosinophilic infiltration.

*Lungs.*—Numerous tubercle-like nodules with central necrosis in some. Organisms in giant cells and free among the tissue cells. The lesions closely resemble tubercles, and, in absence of blastomyces, would probably be considered as such. Acid-fast stains made of lung lesions but no tubercle bacilli found. In the pneumonic areas many blastomyces, polynuclear leukocytes, and large mononuclear cells were found in the alveoli. Pus from elbow and ankle



joints contained many budding organisms. Cultures of the organism were obtained from this pus and from lung lesions.

#### COMMENT

In Case 1 the skin lesions preceded the development of systemic symptoms by several months. In Case 2 the duration of the skin lesion was not definitely ascertained and may also in this case have preceded systemic involvement. In Case 2 the cavity in the lung was probably of tuberculous origin since acid-fast bacilli were found in the sputum. Lesions in the bones, joints and subcutaneous tissues were especially striking in Case 2 while absent in Case 1. The treatment instituted had no apparent effect on the disease in either case.

#### SUMMARY

It seems better at the present time to limit the term blastomycosis to infections with the specific organism *Blastomyces dermatitidis* (Gilchrist and Stokes).

Two cases of systemic blastomycosis with autopsy findings are reported. These illustrate the variability of the distribution of the lesions in different cases.

523 West Sixth Street.

#### REFERENCES

1. American Journal of Tropical Medicine, Vol. viii, No. 5, p. 379.
2. Fungi and Fungus Diseases. Aldo Castellani, 1926.

#### DISCUSSION

W. T. CUMMINS, M. D. (Southern Pacific General Hospital, San Francisco).—The debatable matter in this publication is the classification proposed by Castellani. We agree with the authors that the organism causing blastomycosis must not be of the same genus as *Coccidioides immitis*, for we believe that they have different methods of reproduction. This alone seems to be a sufficient reason for their generic differentiation. If the classification of Castellani were adopted, in the writer's opinion it might promote further confusion in the differentiation of blastomycosis and coccidioidal granuloma. Culturally and clinically we know well that the diseases closely resemble each other and that either may be, and doubtless frequently has been, diagnosed as tuberculosis.

Potassium iodid failed as a therapeutic agent in each of the patients. It is unfortunate that a number of blood cultures are not made on each blastomycotic case (as well as coccidioidal), for it seems likely that the widely disseminated lesions must be induced at least terminally by blood vascular transportation of the infectious agent. It is not unlikely that we shall find that the coexistence of active tuberculosis and mycotic disease of this type is not unusual.

This paper is of timely value not only in the presentation of data for the clinician and pathologist, but also in reminding them to keep alert as to the importance of mycotic diseases, their careful study and differentiation.

✽

H. A. WYCKOFF, M. D. (Lane Hospital, San Francisco).—The two cases reported in this paper should prove a valuable addition to the literature of mycotic diseases, and this is especially true in view of the comparative completeness of the observations.

While a close interrelationship of the mycoses is obvious from more than one standpoint, the endeavor of these authors to maintain a sharp distinction be-

tween blastomycosis and coccidioidal granuloma is fully justified.

Recognizable differences in the clinical course in these diseases suggest a difference in causative organism and, even though the fungi show similarity when grown upon artificial culture media, the manner of reproduction in the tissues is quite different and seemingly invariably constant.

✽

NEWTON EVANS, M. D. (710 Orange Grove Avenue, South Pasadena).—The authors' contention concerning the classification and nomenclature of the organism studied and its dissimilarity to the parasite of coccidioidal granuloma appears to me to be well grounded.

The anatomical findings in these two cases are quite similar to those reported in others of systemic blastomycosis. The absence of distinct blastomycotic lesions of lymph nodes is like the majority of cases described. It would have been of interest had observations been made upon the brains, or at least mentioned if they were included in the examinations. Rarely are brain lesions found, and where they have been present the lesions were in the brain substance rather than the meninges. The characteristic subcutaneous abscesses and the deep, crusted ulcers which were a prominent feature here are like others reported and in contrast to the more superficial lesions of "blastomycetic dermatitis."

The geographical distribution of this mycotic disease as compared with that of coccidioidal granuloma is a striking feature. One of these patients came from the southern part of the United States and possibly brought the infection with him. The previous places of residence are not mentioned in the other case. If there are recorded cases of blastomycosis of persons who have lived only in California they must be very few. The great majority have occurred in the central and southern states. In contrast, the cases of coccidioidal granuloma occurring outside of California are uncommon.

#### A TUBERCULOSIS CLINIC FOR CHILDREN\*

By LLOYD B. DICKEY, M. D.  
San Francisco

THE results of educational campaigns directed against tuberculosis are mirrored in ever decreasing mortality rates from this disease. Early diagnosis being the clue to early and permanent arrest, campaign slogans have continually emphasized the nature of early symptoms in adult pulmonary tuberculosis. Education of the public has taught it to know these symptoms, and has contributed largely to the increasing number of cases early diagnosed. There has followed, in consequence, the removal of tuberculous individuals as contacts to susceptible children, which probably explains the recent lessened incidence of tuberculous disease in the young.

#### TUBERCULOSIS SYMPTOMS IN CHILDREN DIFFERENT FROM ADULTS

Most children who come to the physician to be examined for evidence of tuberculosis do so because of their history of contact with an open case of this disease. Probably many more who should come fail to do so because parents or guardians do not appreciate that significant symptoms in children are not the same as those for

\* From the Department of Pediatrics, Stanford University Medical School, San Francisco.



adults. The children being free of the symptoms from which the adults suffer, the significance of the contact is not appreciated. Those who frequently see tuberculous disease in children know how seldom hemoptysis, productive cough, night sweats, and loss of weight are symptoms of early juvenile tuberculosis of any type. They also realize how seldom a physical examination of the chest yields any information valuable in diagnosing early tuberculosis in children.

Before the public may be educated to and appreciate the difference between the early symptoms of adult and of juvenile tuberculosis, it is first absolutely necessary that physicians and other workers in tuberculosis be educated to this difference. Many cases could be cited of detailed histories of contact children, taken by tuberculosis nurses and other workers, where a careful inquiry was made into the occurrence of night sweats (properly called slumber sweats), hemoptysis, cough with sputum, loss in weight, and other symptoms only common in adult pulmonary tuberculosis. While all of these may occur in the juvenile type of the disease they are usually not significant in early cases.

The real injustice to the children comes from the physician in the tuberculosis clinic, who, with a negative history of the above symptoms, examines a child's chest, elicits no signs, and dismisses it as undiseased. Yet such things happen, and happen in clinics conducted especially to diagnose tuberculosis in its incipency.

The study of tuberculosis in childhood, during which time most individuals contract their initial infection, is important for a proper understanding of the evolution of the disease. It is probable that the course of the infection in this period determines the degree of resistance in adult life, when at least casual exposure to this ever present disease must be constant. Realizing that to control any disease it must be attacked at its source, the San Francisco Tuberculosis Association in 1925 aided in establishing a clinic for the detection of tuberculosis in childhood at Stanford University Medical School. A similar clinic was held at the University of California Medical School, although the methods of study differed in minor details. The outline of the work presented below is that initiated at Stanford.

#### OUTLINE OF CLINIC WORK AT STANFORD

*The Clinic Itself.*—An ideal tuberculosis clinic for children should have ample funds at its command so that no aid in diagnosis need be omitted. The item of roentgenographs being one of the most important from a diagnostic standpoint, and the expense of these being one of the heaviest drains on the funds of any clinic where these must be paid for, funds for them should be provided before any attempts at diagnoses be made. In our clinic, expenses were chiefly financed by the San Francisco Tuberculosis Association, and at no time during the three years the clinic has been held was it necessary to defer or omit the taking of any roentgenogram essential in the diagnosis of a single case. Expenses were also con-

siderably curtailed because of the courtesy of all members of the department of roentgenology of the medical school in giving large amounts of their time in consultation.

The clinic should be an integral part of a general children's clinic, which in turn should be a part of a general dispensary. An isolated clinic for suspected tuberculous individuals would seem at a distinct disadvantage as compared with one which had facilities for refers and consultations with other medical workers.

*The Medical Staff.*—Ideally such a staff would consist of several workers interested in the study of tuberculosis, the number depending upon the number of children available for examination, and would consist of physicians who were seeing at the same time large numbers of normal children, and children suffering from other conditions not allied to tuberculosis. The physicians should have an adequate knowledge of adult tuberculosis, in addition to a more complete knowledge than the average physician has about tuberculosis in childhood. A short time of training in a tuberculosis sanatorium would give such workers a valuable perspective, and an appreciation of the differences between adult and juvenile tuberculosis could be gained. The physicians should be thoroughly familiar with the accepted aids in diagnosing juvenile tuberculosis, both active and latent; and after the gathering of data, should know how properly to evaluate the history, the physical examination, the roentgenographs, the tuberculin tests, and the laboratory aids.

*The Nursing Staff.*—The duties and functions of the nursing staff should be, first, taking of most of the histories, the performing of the tuberculin tests, and the assembling of the data for diagnosis, after the physician has performed the physical examination. Upon this division of the staff would fall the burden of the social service work; the visiting of patients who failed to return for tuberculin readings; home visiting to prepare families of patients for the institutionalizing of their children, when necessary; and the completion of the routine necessary for placing an active patient in an institution.

The ideal nurse for such a clinic is one who knows more about tuberculosis than does the average nurse. She should be able to do tuberculin testing and should know what a positive test means, and what it does not mean. She should be able to explain intelligently to a mother the significance of a positive test. She should be able to take a good history, and should therefore know the significant symptoms of childhood tuberculosis. She should know the treatment of tuberculosis, and should have the ability to explain to a family the necessity of the proper treatment, and the ability to reconcile them to the absence of the child from the home when institutional care is necessary.

With an equal number of patients, the work of a visiting nurse in a children's clinic for tuberculosis would be considerably greater than in a clinic for adult patients. As compared with juve-



nile tuberculosis the adult type is relatively easier to diagnose. In the latter often a single clinic visit is sufficient for diagnosis if a careful history be taken, a complete physical examination be done, with roentgenological and sputum examinations. Many children must have a rather intensive period of observation before the aids at our command for diagnosis can be properly evaluated, and this may necessitate many "follow-up" visits.

*Diagnosis and Disposition of Cases.*—In three years time over 2500 children from our clinic were tuberculin tested, approximately 700 reacting positively, and the latter were selected as patients for this clinic. The occasional failure of tuberculous patients to react to intracutaneous tuberculin is relatively unimportant, and practically never occurs in ambulant patients reporting to an out-patient clinic. Such a phenomenon occasionally occurs in patients overwhelmed with tuberculous disease, where other signs and symptoms are present in sufficient number to diagnose tuberculosis without the aid of the skin test. We have never seen a proved case of tuberculous disease that reacted negatively to tuberculin intracutaneously with a dose of one-tenth milligram of K. O. T.

A record was started for all patients reacting positively. Each patient had of course, in addition, a clinic chart in which was a record of the history of all complaints, diagnoses, and treatments at the children's clinic. By the use of the signs + and — for positive and negative findings, the entire record as to tuberculosis is condensed, and the data assembled on a single card. Subsequent findings on successive visits to the clinic could be tabulated and progress noted without hunting through masses of records. The reverse side of the card was used to record the date, size, and area of the tuberculin test, to elaborate on positive findings which needed further description, and notes as to final disposition or outcome of the case.\*

After the evaluation of the aids in diagnosis, the history, the physical examination, the roentgenograph, the tuberculin test, and the laboratory findings, a diagnosis was made on each case. Then came the problem of disposing of the cases which were diagnosed as active, suspected, or latent tuberculosis.

Such a clinic should have access ideally to several types of institutions. Active cases should be sent to a special institution for tuberculous children, thus initiating the most important single step in the treatment of juvenile tuberculosis, which is the removal of the patient from the contact. The institution should be one where the remainder of the treatment of childhood tuberculosis, both general and special methods, are understood and where the facilities for carrying out this treatment are adequate. It is especially important that facilities for natural and artificial heliotherapy be supplied, and that special surgi-

cal procedures can be carried out if necessary. It should be an institution where children are kept in absolutely separate wards from open cases of tuberculosis. Most cases of tuberculosis in childhood are not in themselves contagious, but in the few instances where this does occur, these patients should be separated from active "closed" cases.

Cases classified as suspected usually need further observation. There should be available some bed space where an intensive work-up of these cases can be completed, and where they can be observed for a period of study. The teaching wards of Lane Hospital, which is the teaching hospital for the University Medical School, served such a purpose for our clinic. Other places available for suspected cases are the tuberculosis preventoria for children, several of which are in the vicinity. Cases classified as suspected should, of course, be placed in one of the other two groups as soon as possible.

Many cases classified as latent may be dismissed to return in several months for further observation. Others need treatment for some other ailment, and attention called to the correction of certain defects. Some of these patients are suitable candidates for convalescent homes, or for a stay in the country under the stimulating benefits of fresh air, sunshine, and proper food.

From the 700 cases of tuberculous infection obtained from a testing of over 2500 children, the following diagnoses were made:

Tuberculosis, lymph nodes, active.....	15
Tuberculosis, lymph nodes, healed .....	5
Tuberculosis, bones and joints, active .....	23
Tuberculous pleuritis, with effusion.....	13
Tuberculosis, hilar, suspected.....	173
Tuberculosis, hilar, active .....	65
Tuberculosis, latent .....	396
Tuberculosis, pulmonary, adult type, suspected .....	12
Tuberculosis, pulmonary, adult type, active.....	21
Tuberculosis, pulmonary, adult type, latent.....	6
Tuberculosis, miliary, active.....	4
Tuberculosis, miliary, healed .....	2
Tuberculosis, meninges, active.....	6
Tuberculosis, kidneys, active .....	3
Tuberculosis, skin, active.....	2
Tuberculosis, choroid, active.....	2
Tuberculosis, active, of epididymis, peritoneum, and larynx, each .....	1

We feel that, except for the careful study that this special clinic afforded, many of the cases would have been misdiagnosed, or undiagnosed. The status of the children diagnosed as latent tuberculosis, or the so-called "pretuberculous" children, is especially important to determine. This is the potentially diseased group among which the satisfying but rather undramatic practice of preventive medicine can be instituted. From the standpoint of the diagnosis of cases alone, the clinic has amply justified its existence, and the money expended in it. Besides this it has afforded an excellent opportunity for a study of the incidence of tuberculous infection among children in the vicinity, of tuberculous disease among those infected, and the experiment has accumulated a wealth of material for further clinical study. The association of this clinic with the children's clinic

\*Copy of the Stanford chart used for filing a condensed record of patient's condition will be sent on application to the author.



of the Stanford Medical School has been of great value in the teaching of tuberculosis in childhood, and has helped many future practitioners of medicine to realize the importance of such an ever present medical problem.

Stanford Medical School.

## ANESTHESIA FOR CHILDREN\*

WITH REFERENCE TO ORTHOPEDIC SURGERY

By JAMES RAYMOND MARTIN, M. D.  
Los Angeles

IN the administration of anesthetics to children needing orthopedic surgery, we are confronted with two problems. First and most important, the carrying of the patient through the operation with the minimum amount of shock and undesirable postoperative effect. Second, making the anesthetic as pleasant as possible for the patient. Many of these children need several operations before the desired results are obtained, and a disagreeable anesthetic experience at the first operation may upset the whole plan of the surgeon.

### CASE RECORDS HERE REVIEWED

It is with these two problems in mind that this résumé has been prepared. It is based on the past four years' anesthetic records of the Los Angeles Orthopedic Hospital. These records cover a total of 1807 general anesthetics, including both major and minor operations, with tonsillectomy excluded. There have been no deaths. In one case a possible pneumonia followed an ether anesthetic in a little Mexican child. This patient was considered a poor risk and was complicated by a postoperative staphylococcus wound infection. Most of the anesthetics have been given by one person and all by skilled anesthetists. Only a portion of the 1807 anesthetics records have been selected for this survey. The records for 1928 were chosen because a more accurate record system has been in use in the past two years. Before discussing these records several points are worthy of mention in regard to preparation and technique. See Tables No. 1 and 2.

### PROCEDURES USED

These surgical patients have a two-day preparation during which time the usual examinations and surgical preparations are made. This is a period when the patient should be put at ease, so that the stage of excitement on entering the operating room is almost nil.

It is our rule not to hold or tie the patient on the table when the anesthetic starts. An attendant standing by is able to guide the hands away from the mask. Using nitrous oxid or ethylene induction there is seldom any resistance, especially when the eyes are allowed to remain uncovered. Patients are anesthetized on their backs regardless of the location of the operation. When it is necessary to turn a patient flat on the abdomen, a small sand bag placed under the left

shoulder and another under the left hip will lift the body enough to make breathing much easier. In this way respiratory muscles are relieved from lifting the body at each respiration, preventing respiratory fatigue. The diaphragm is not crowded up by the abdominal contents, giving more freedom for the heart action. This position does not interfere with spinal fusion or other back operations, and seems to be a great aid in the prevention of both cardiac and respiratory fatigue.

Most orthopedic operations are not emergency surgery. Therefore the operative work is done at a time when the patient is in the best physical condition. Oftentimes it is necessary to have the patients under medical care several weeks before they are considered safe risks. This care no doubt is a big factor in the ultimate results. Acute osteomyelitis, accident cases and spastic paralysis make up the larger part of the poor risks. By studying the accompanying chart, we find that, out of a total of 486 cases, some were considered A risks, some were B risks, some were C risks, and some D risks. The spastic paralysis cases are usually considered B risks because of the instability of the autonomic nervous system.

The condition of the patient at the close of the operation was found to correspond very closely to the condition when the anesthetic began. The figures show a good general condition for 88 per cent, a fair condition for 12 per cent, and a poor condition for .01 per cent. The degree of shock or circulatory depression at the close of the operation corresponds very closely to the type of surgical risk to be operated. We find: first degree, or no shock, 87 per cent; second degree shock, 12 per cent; third degree shock, .01 per cent.

The length of time and severity of the operation, the loss of blood, and the fear on the part of the child are all important factors which must be considered as producing shock. In the series here reported 165 operations were less than thirty minutes in length, with very little hemorrhage. However, this group included a number of hip reductions in infants which produced a noticeable degree of shock. There were 307 operations, ranging in time from thirty minutes to over two hours in length, including such operations as open hip reductions, ramisectomy and spinal fusions, procedures which produce a great deal of shock and considerable loss of blood.

Secondary or follow-up operations at too short intervals for recuperation also tend to produce shock and leave the patient in poor condition. The anesthetic in these patients seems to come secondary to the surgery in the postoperative effect.

### FIGURES FOR DIFFERENT ANESTHETICS

Ethylene was adopted as a routine anesthetic in this hospital early in 1927 and has since been used for all general work unless contraindicated.

In this résumé ethylene was given in 76 per cent of all the anesthetics. The full number include twelve instances when nitrous oxid was substituted while the motor saw was being used; one hundred and ten cases in which a small

\* Read before the Anesthesiology Section of the California Medical Association at the Fifty-Eighth Annual Session, Coronado, May 6-9, 1929.

TABLE 1.—*Showing Total Number of Patients and Classification*

	Ethylene		Ethylene and Ether		Ether		Nitrous Oxid and Nitrous Oxid and Ether		Total	
Cases	251		110		60		65		486	
Risks	A	209	A	89	A	50	A	65	A	413
	B	37	B	13	B	10			B	60
	C	5	C	6					C	11
			D	2					D	2
Shock	1	218	1	85	1	54	1	63	1	420
	2	33	2	20	2	5	2	2	2	60
			3	3	3	1			3	4
Postoperative condition	G	209	G	99	G	38	G	64	G	430
	F	20	F	6	F	22	F	1	F	49
	P	2	P	5					P	7
Nausea	No	209	No	78	No	40	No	61	No	386
	Moderate	42	Moderate	32	Moderate	19	Moderate	4	Moderate	97
					Severe	1			Severe	1
Less than thirty minutes	85	85		17		23		40		165
More than thirty minutes		152		93		37		25		307
Urine	Negative	232	Negative	76	Negative	49	Negative	54	Negative	411
	Acetone	5	Acetone	31	Acetone	11	Acetone	6	Acetone	53
	Albumin	2							Albumin	2
			Albumen and casts	3					Albumin and casts	3

amount of ether was used to get complete relaxation in the absence of a preoperative narcotic. The addition of ether in most cases was for only a very small part of the anesthesia.

In this group appear most of the serious operations and also the largest percentage of the poor risks. Twenty-eight per cent of the children in this series were under eight years of age. Their records correspond very closely with 72 per cent that were over eight years of age. The number of male and female patients was about evenly divided and showed no noticeable differences in anesthetic reaction.

In this group receiving ethylene and including those that received a small amount of ether in

addition, we find the percentage of good condition higher at the close of the anesthetic than the per cent of good risks before operation in spite of the fact that the anesthetics were longer and the operations more severe.

A little larger per cent showed signs of shock, or circulatory depression, before they left the table, but this quickly passed off when they were returned to bed. The estimation of shock was by pulse only, the blood pressure not being taken. A large percentage of the ethylene patients vomited when the mask was removed, but this complication is not noted in the records. Only the nausea and vomiting after the patient was returned to bed was recorded. In a very small per

TABLE 2.—*Showing Totals of Table 1, Transposed into Percentages*

	Ethylene		Ethylene and Ether		Ether		Nitrous Oxid and Nitrous Oxid and Ether		Total	
Cases	251		110		60		65		486	
Risks	A	.83	A	.81	A	.83	A	1.00	A	.85
	B	.15	B	.12	B	.17			B	.123
	C	.02	C	.05					C	.023
			D	.008					D	.004
Shock	1	.87	1	.77	1	.90	1	.97	1	.86
	2	.13	2	.18	2	.08	2	.01	2	.12
			3	.27	3	.017			3	.008
									†	.004
Postoperative condition	G	.91	G	.90	G	.63	G	.98	G	.885
	F	.08	F	.05	F	.37	F	.02	F	.101
	P	.008	P	.05					P	.01
Nausea	No	.83	No	.11	No	.66	No	.94	No	.80
	Moderate	.17	Moderate	.29	Moderate	.37	Moderate	.06	Moderate	.20
					Severe	.02			Severe	.002
Less than thirty minutes		.39		.15		.38		.62		.34
Over thirty minutes		.61		.85		.62		.38	†	.63
										.03
Urine	Negative	.92	Negative	.69	Negative	.82	Negative	.83	Negative	.85
	Acetone	.02	Acetone	.28	Acetone	.18	Acetone	.09	Acetone	.11
	Albumin	.007							Albumin	.004
			Albumin and Casts	.03					Albumin and cast	.006
									†	.04

† Cases not recorded.



cent was this continued longer than two hours. There was a larger number in this group showing acetone the first twenty-four hours. This seems to be confined largely to the long operations and the poor risks.

Preoperative narcotic was used in 25 per cent of the cases exclusive of children under eight years of age. This is too small a number to draw any definite conclusions. However, in those cases in which it was used, the results to the patient have been favorable and, from the anesthetist's standpoint, very helpful.

Morphin and atropin have been used mostly, but recently scopolamin has been added with very gratifying results. It appears that, with more experience in its use, scopolamin may become an adjunct to anesthesia for children.

A few times a respiratory paralysis was observed. The breathing can be readily reëstablished by inflating the lungs immediately with oxygen and carbon dioxide, but it must be done before the pulse begins to slow and become weak.

The group of patients who receive ether alone has become steadily smaller each month until now this group includes only 14 per cent of those anesthetized. Most of the ether anesthetics were given either by colleagues who feel a little timid about handling all patients under nitrous oxid or ethylene, or because the surgeon requested its use. Ether was also used with infants. It has been the anesthetic of choice for the infant because of the broad margin of safety.

Recently we have obtained a small mask that enables the administration of nitrous oxid and ethylene to very small children, and our results correspond with those of the older children. In this group all ages are represented and the average risks are included. Most of these were short, light anesthetics. The percentage of postoperative depression is higher than for other anesthetics. The amount of shock is less. The explanation of this may be the fact that both ether and nitrous oxid are circulatory stimulants, while ethylene is a slight depressant. The result of stopping the anesthetic removes this stimulant and a depression is noted. Acetone was present in 18 per cent of the cases receiving ether alone.

The group of patients to whom nitrous oxid or nitrous oxid and ether anesthesia was administered was considered A risk. Most of the surgical work was of a minor character, such as closed reduction of fractures, manipulation of club-feet or congenital dislocated hips. The procedures used were such that very little shock was produced, and only light anesthesia was required.

Because of the danger of explosion from ethylene when the x-ray or fluoroscope is used, nitrous oxid has been the anesthetic of choice for this type of work, ether being added for a few minutes to get relaxation if necessary. This group represents a larger proportion of minor work and should not be contrasted with the other groups where there are poorer risks, longer and deeper anesthesia, and more severe surgical shock.

Moderate nausea was noted in only four of the sixty cases. The condition of the patients after

return to bed was good in all cases except one, which was considered fair. The record of the postoperative urine findings showed 83 per cent clear, and 17 per cent showed acetone the first twenty-four hours.

#### SUMMARY

It is fully admitted that there are many valuable facts concerning the anesthesia for children which might be gleaned from further study of this small series of case records. These records represent the total series of 1807 cases, beginning with a higher percentage of ether anesthetics, while later nitrous oxid was in the lead. The past eighteen months, ethylene has been used almost as routine anesthetic.

It would seem that each anesthetic agent has its merits and its shortcomings. In this type of work the anesthetic of most merit and best suited for the individual case should be used. The physical and mental condition of the child on entering the operating room, the care and skill of administering the anesthetic, the length of time and severity of operation, are all important points to be noted just as in adult anesthesia. In conclusion, from a study of this series it would seem that the proper handling of the patient, both before and during the anesthetic, is as important as the type of anesthetic used.

746 Francisco Street.

### CARCINOMA OF THE UTERUS—ITS TREATMENT BY RADIATION\*

By ALBERT SOILAND, M. D.

AND

WILLIAM E. COSTOLOW, M. D.

Los Angeles

DISCUSSION by R. R. Newell, M. D., San Francisco; Lyell Cary Kinney, M. D., San Diego; H. J. Ullmann, M. D., Santa Barbara.

THE first radium treatment for carcinoma of the uterus was given by Abbe in New York in 1905. Following this the technique was rapidly developed in this country, and also in France, where faith in radium has remained constant and where it has largely replaced surgery. Results became better as the radium technique in carcinoma of the cervix improved, until at present it is the method of choice in practically all medical centers.

#### CLASSIFICATION ACCORDING TO EXTENT

In the consideration of the treatment of carcinoma of the cervix, it is important to group the cases according to the extent of the disease. The following grouping advised by Schmitz<sup>2</sup> is the one generally used in this country:

Group 1.—Comprises the cases in which the cancer is clearly localized to the cervix.

Group 2.—In which doubt exists as to localization. These cases usually show a doughy or

\* From the Albert Soiland Clinic, Los Angeles.

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edematous consistency of the paracervical tissues. (Border-line cases.)

Group 3.—Cases in which there is an induration of the contiguous tissues and organs. (Inoperable group.)

Group 4.—Contains the cases in which there are necrotic craters, frozen pelvis, advanced cachexia, and distant metastasis.

Early cases which would compare with Group 1, as above, are rarely seen, and probably do not amount to more than ten per cent of the cases of carcinoma of the cervix applying for treatment at the various hospitals and clinics. Less than five per cent of 550 cases of cervical carcinoma treated at the Soiland Clinic during the past six years would fall into this group. Most of the very early cases were those which were accidentally discovered.

We are not including a statistical review of the results from our own clinic because it has been impossible for us to obtain a complete follow-up system, and not until recently have we insisted upon biopsy and microscopical examination in every case. Statistics are certainly not of much value if it is impossible to trace a considerable percentage of cases. Our clinic records extend back to the first days of the use of radiation, and the number of five-year symptom-free cases which we have been able to trace leads us to believe that our statistics, were they complete, would compare favorably with those from reliable sources which are quoted in this article.

#### SURGICAL STATISTICS

The surgical results in carcinoma of the cervix have been extremely poor even from the most radical operations. Heyman<sup>1</sup> found, in collecting statistics from twenty large clinics (5806 cases), that the absolute five-year cure amounted to only 19.1 per cent. These results are from clinics of the best operators, using the most radical forms of operation.

For many years practically everyone has been willing to allot most of the border-line or doubtful operable cases, and all of the advanced cases, to radiation treatment but, until recently, some have insisted on surgery in the early cases. From twenty-four different clinics Heyman<sup>1</sup> collected 3659 cases (early and border-line corresponding to Groups 1 and 2 as outlined) which were treated by surgery alone. He found only 35.6 per cent cures. The mortality amounted to 17.2 per cent.

The high mortality (8 to 20 per cent—Polak<sup>4</sup>), and the high morbidity detract greatly from surgical results. Wertheim had a mortality of 30 per cent in the first 100 cases in which he carried out his radical operative procedure. This causes one to wonder what mortality and morbidity the average surgeon must have who attempts this radical operation, and who probably does not operate on 100 cases during his entire career.

The difficulty of technique and the high mortality of radical operations, as the Wertheim, has caused the average surgeon often to do only the

ordinary panhysterectomy or, as in some cases of carcinoma of the fundus which we have been called on later to treat, only a subtotal hysterectomy was performed. Of course, the above procedures are unjustifiable. Certainly, the five-year cures would undoubtedly be very few if statistical results were available in these cases.

It is difficult to improve surgical technique much further, as the vital organs surrounding the cervix limit the extent of the radical procedures. On the other hand, radiation technique is being constantly improved and the percentage of five-year cures is increasing from year to year in various clinics.

John G. Clark, of Philadelphia, who was one of the pioneers in the development of the radical operation, even preceding Wertheim, was one of the first men in this country to give up surgery in carcinoma of the cervix in favor of radium.

#### RADIATION IN EARLY STAGES

Radiation has not been used in early and border-line cases of carcinoma of the cervix a sufficient length of time for a very large series of cases to be collected. Heyman<sup>1</sup> collected 960 cases from twelve different clinics, treated exclusively by radiation. He found 34.9 per cent five-year cures, with a mortality of less than two per cent. In the statistics collected by Heyman, the operability in the surgical cases was 43 per cent as compared to less than 30 per cent in the radiological figures. Even though the surgical and radiological results in the early cases appear similar, the advantage of radiation treatment is obvious when the 17 per cent mortality of the surgical statistics is considered. In clinics where a careful follow-up system is maintained, percentages of five-year radiation cures in early cases have been reported which are much better than the average referred to in Heyman's article, the Radiumhemmet in Stockholm<sup>1</sup> reporting 44.4 per cent and Ward<sup>5</sup> at the Woman's Hospital Clinic, New York (May, 1928) reporting 53.1 per cent five-year cures. These facts have caused the majority of the important gynecological clinics in this country and abroad to use radium and roentgen ray exclusively in all cases of carcinoma of the cervix.

As for the use of the cautery, Greenough<sup>3</sup> reports from the material collected for the American College of Surgeons, that of fifty-two cases reported where the cautery alone was used, there was *not a single five-year cure*.

#### IMPORTANCE OF THE CONSIDERATION OF RADIOSENSITIVITY

Increasing attention has recently been given to the consideration of the type of cell in the particular growth and to the question of radiosensitivity. For many years it has been noted that cervical carcinoma has varied in its response to radiation. Where the conditions clinically appeared similar, and were treated by the same technique,



it has been observed that the response in one case would be slow and uncertain, while in other cases the disease would melt away rapidly and completely. It is now known that this is largely due to a difference in radiosensitivity of the cells.

CLASSIFICATION ACCORDING TO CELL TYPE

The method of grading the degree of malignancy used at the Memorial Hospital in New York, and worked out by Doctors Healy<sup>7</sup> and Cutler, with the coöperation of Doctor James Ewing, is probably the simplest and most satisfactory for practical purposes. The cases are graded according to the degree of anaplasia present in the cells and the relative amount of stroma. The greater the degree of anaplasia the more malignant the cell. The different grades are described as follows:

- Grade 1.—Adult type. Cells adult in character, highly differentiated, with a tendency to hornification and pearl formation.
- Grade 2.—Plexiform type. Only partial differentiation and moderate anaplasia. Squamous characters either slight or, more often, absent. The growth may be atypical but lacks diffuse infiltration; there is a partial loss of polarity. The cells are large and frequently show a plexiform arrangement.
- Grade 3.—Anaplastic type. Cells small, round or spindle shaped, the nucleus markedly hyperchromatic with numerous, atypical mitosis. The cells show absence of squamous characters, atypical qualities, complete loss of differentiation, and diffuse infiltrative growth.

Group 1 has a low degree of malignancy. Group 2 medium, and Group 3 a high degree of malignancy. The more malignant the cells, the more radiosensitive they are; hence Group 3 is highly radiosensitive. Healy found that 96 to 98 per cent of their cervical cases were squamous epidermoid carcinomata, only two to four per cent being adenocarcinoma arising from the cells of the cervical mucous glands.

It is not always possible to determine the degree of malignancy of the growth. Ward and Farrar<sup>8</sup> state that prediction of prognosis from the type of cell present has not been satisfactory, as pieces of tissue taken from different places in the growth have not always revealed the same type of cancer cells. Martzloff<sup>9</sup> found that in carcinoma of the cervix uteri a study of the biopsy material failed to indicate correctly the predominant variety of cancer cells in the parent tumor in about one-third of the cases. On account of the above findings, it is seen that an attempt to segregate the Grade 1 or less radiosensitive cases by biopsy, in order that they might be treated by surgery, would not be very practicable. We also know, as will be demonstrated in the next table, that a large percentage of the Grade 1 cases will respond to radiation treatment.

Healy,<sup>7</sup> in grouping 200 cases according to the degree of anaplasia and radiosensitivity, found the following:

TABLE 1.—Grouping of Two Hundred Cases

Cell Type	Number of Cases	Per Cent
Adult I	35	17
Plexiform II	123	62
Anaplastic III	42	21

It is seen that the adult type, or the less radio-sensitive type, forms the smallest group, with more than 80 per cent of the cases appearing in the more radiosensitive group.

The effect of the histologic cell structure upon end results is shown by Healy<sup>10</sup> in Table No. 2 of cases treated at the New York Memorial Hospital:

TABLE 2.—Cases Treated at the New York Memorial Hospital

Cell Type	Stage of Disease	Total No. of Cases	No. Well	Per Cent Cured 5 Years
Adult (Grade I)	Early and border-line	10	5	50
	Advanced	25	1	4
Plexi-form (Grade II)	Early and border-line	21	9	43
	Advanced	102	15	14
Ana-plastic (Grade III)	Early and border-line	9	6	66
	Advanced	33	14	42

In Table 2 it is demonstrated, the greater the degree of malignancy the more favorable the prognosis from radiation treatment. It is also seen that a large percentage of cures occurred in the Grade 1 cases, which are considered to be the least radiosensitive.

A comparison has been made of the surgical and radiological results in carcinoma of the cervix, showing that as the malignancy of the cell increases, the surgical results become poorer and the radiological results better. This is shown in Table 3.

TABLE 3.—Percentage Incidence of Five-Year Cures for the Different Types of Epidermoid Carcinoma of the Cervix (After Healy) (Early Cases)

	Spinal Cell Cancer (Grade II of Broders)	Transitional Cell Cancer (Grade III of Broders)	Spindle Cell Cancer (Grade IV of Broders)
Johns Hopkins Hospital (Martzloff) (Surgery)	47%	24%	9½%
Mayo Clinic (Broders) (Surgery)	53%	21%	9½%
Memorial Hospital (Radiation)	50%	43%	42% — 66% Adv. Early cases cases

Table 3 thus demonstrates that, in the cases of low degree of malignancy, surgical and radiological results are similar, while in the highest degree of malignancy surgery is almost useless and radiation is of great value.

#### VIEWPOINTS OF SOME SURGEONS

Swanberg<sup>6</sup> cites a few quotations from prominent surgeons and gynecologists which express the present-day opinions regarding the treatment of carcinoma of the cervix:

*Dr. George Gray Ward*, Professor of Gynecology, Cornell University.—“We believe that our results show that radium is preferable in all classes of cervical carcinoma.”

*Dr. William J. Mayo*, Mayo Clinic.—“Cancer of the cervix even in the early stages is certainly as well treated by radium as by hysterectomy.”

*Dr. William P. Healy*, Memorial Hospital, New York.—“Hysterectomy is no longer justifiable as the treatment of carcinoma of the cervix, based upon five-year results.”

*Dr. Charles C. Norris*, Professor of Gynecology, University of Pennsylvania.—“We have not submitted a case of cervical carcinoma to hysterectomy for five years.”

References could be given to many other large clinics, in this country and abroad, where radiation is used exclusively in all cases of carcinoma of the cervix.

#### TECHNIQUE OF RADIUM TREATMENT

In order to secure good results from the use of radium in carcinoma of the cervix, a carefully planned technique should be followed. At the present time the dangers of radium are few, except in the hands of the inexperienced, where great harm may result. Cases must be considered and treated individually, but as much standardization of technique as possible should be used. A specimen should be removed for diagnosis of the cell type in all cases of cervical carcinoma. This should be followed immediately by an application of radium. The habit of removing a section and waiting a week or ten days before instituting treatment is pernicious. At the present time we feel that a technique similar to that advanced by Heyman,<sup>11</sup> in which only heavily filtered radium is used, gives the best end results.

In the average cervical carcinoma favorable for treatment, we are at present dividing the treatment into two applications, with three weeks' time intervening. At the first application a total of 3500 milligram el. hours are given, applying 2100 milligram el. hours against the cervix, filtered by two millimeters of gold and one millimeter of rubber, and 1400 milligram el. hours intrauterine, filtered by one millimeter of gold and one millimeter of rubber. Three weeks later, by the use of similar filtration, a total of 3000 milligram el. hours are given, applying 1800 milligram el. hours against the cervix and 1200 milligram el. hours intrauterine. Three twenty-five milligram tubes are used in the vaginal

applicator, and two twenty-five milligram tubes, placed in tandem, are used in the uterine applicator. These tubes are all covered by .5 millimeter of silver. The duration of the first application is twenty-eight hours and the second application twenty-four hours, the radium being applied against the cervix and intrauterine at the same time. Following this, no further radium should be given for from six to twelve months.

The patient is observed at monthly intervals, and late recurrences, appearing a year or so after the original treatment, are often treated with small doses of radium applied locally, although great care is exercised. Often suspicious thickened areas remain for several months and finally disappear. These areas should not be treated unless they are definite of malignancy. Experience of observation is a most valuable asset at this stage of the treatment.

#### VALUE OF ROENTGEN RAY TREATMENTS IN CONJUNCTION WITH RADIUM

Some gynecologists have used radium alone in the treatment of cervical carcinoma, with results which are good. In early cases radium alone may possibly be sufficient but, as urged by Schmitz,<sup>12</sup> roentgen ray should be applied to produce a homogeneous radiation throughout the pelvis, in order that the regional lymph nodes may receive sufficient radiation. Schmitz<sup>13</sup> found in his series of cases that there was a higher percentage of five-year cures in the group which received high voltage roentgen ray treatment in addition to the radium. For many years various writers have reported complete cures in cervical cases from the use of roentgen ray therapy alone. Recent reports by Zweifel<sup>14</sup> and H. Holzveissig<sup>15</sup> confirm this. Knowing the definite value of additional roentgen ray treatment, we believe that the patient should be given the advantage of this treatment following the radium in all cases, if there are no definite contraindications such as severe anemia or a poor general condition. We usually begin the high voltage roentgen ray treatments from ten to fourteen days after the last radium application, and we give as near a complete depth dosage as possible. The roentgen ray treatments may be given before the radium applications.

#### CARCINOMA OF THE FUNDUS UTERI

It has been estimated that only about ten per cent of uterine cancers originate in the fundus. Carcinoma of the fundus usually occurs after the menopause. Peterson states that 73 per cent of his cases were between fifty-five and sixty-five years of age. At this age, patients frequently show signs of degenerative changes in the heart and kidneys, and often are poor operative risks. Irregular bleeding after the menopause is indicative of malignancy, although not always. Very often the bleeding is from a benign condition; such as senile endometritis, senile vaginitis, hypertension, or cervical polyps. Benthin<sup>16</sup> found, in a series of 131 cases of bleeding after the menopause, that cancer was the cause in only fifty-six cases. In seventy-five of the cases there was no



tumor of any kind, either benign or malignant. Curettage is the most positive diagnostic method in this condition, but it is not by any means infallible. There are certain dangers to curettage in the presence of carcinoma. Victor-Pauchet<sup>17</sup> has pointed out that the removal of fragments of tissue from the body of the uterus may produce perforations which heal spontaneously, but which very frequently result in metastasis of the cancer. Pelvic peritonitis from the stirring up of an associated pyometra, as well as transtubal transplantations of carcinoma cells, has occurred. Certainly, if diagnostic curettage is to be done, it should be followed the same day by the application of radium, or by a total hysterectomy.

END-RESULTS IN SURGICAL TREATMENT AND RADIATION

The general belief is often expressed that the results in carcinoma of the fundus are very favorable if hysterectomy is done. An examination of the best operative statistics shows that such is not the case. Smith and Grinnell<sup>18</sup> report an absolute curability of only about 20 per cent. Clark and Norris<sup>19</sup> found that only 34.8 per cent of their cases were alive at the end of three years. Heyman<sup>1</sup> found 42.8 per cent absolute five-year cures in 318 cases gathered from six different foreign surgical clinics. In early cases, which were clearly operable, he found 58.8 per cent cures in 323 cases from eight different clinics. In 118 early, operable cases treated by radiation alone in five different clinics, he found 47.5 per cent five-year cures.

Heyman<sup>1</sup> has compared the five-year cures in carcinoma of the fundus at the Radiumhemmet with the best surgical statistics as follows:

TABLE 4.—Comparison of Surgical and Radium Cures

	Percentage of Surgical Cures	Percentage of Radium Cures
All cases	42.8%	43.5%
Early or operable cases	58.8%	60.0%

All inoperable cases of carcinoma of the fundus, and cases technically difficult of operation, should certainly be irradiated. It seems possible that even in the operable cases results may be obtained by radiation which would equal the present surgical results.

In the treatment of carcinoma of the fundus, we use combined radium and roentgen ray treatment. A total dosage of 4000 to 5000 milligram el. hours of radium, filtered by one millimeter of gold and one millimeter of rubber, is applied intrauterine. This is followed by deep roentgen ray therapy in about two weeks.

CONCLUSIONS

1. Roentgen ray therapy should be combined with radium in all cases of uterine carcinoma unless contraindicated by the poor, general condition of the patient.

2. Advanced cases of carcinoma of the fundus uteri should be treated by radiation alone. It seems possible that results may be obtained by radiation in early cases of carcinoma of the fundus which will equal the present surgical results.

3. Carcinoma of the cervix uteri is no longer a surgical condition and should be treated by radiation alone.

1407 South Hope Street.

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DISCUSSION

R. R. NEWELL, M. D. (Stanford University Hospital, San Francisco).—At Stanford we have used a number of methods against cancer of the cervix: Single massive radium dosage in the canal, radium followed by radical operation, radium together with x-ray deep therapy, x-ray without radium. Our results have seemed to us much better since, under the influence of Heyman's work, we adopted straight radium treatment, heavy filtration, broken dosage.

Technique is of basic importance. Cross fire is the underlying principle. Experience in placing the radium is invaluable. The cases must be individualized. Dosage must be very heavy, yet one must avoid producing a fistula. Our vaginal applicators are two centimeters in diameter and are customarily packed into the lateral fornices. Thus fixed, one centimeter spacing of the radium away from vaginal mucosa is a safety feature of great importance. But the intrauterine applicator must be slim, so that cancer be not disseminated by vigorous dilatation.

We have stopped using x-ray to supplement the radium. This in spite of the fact that we have a very few cures from x-ray alone. These we attribute in each instance to extraordinary susceptibility of the patient to x-ray, amounting to idiosyncrasy. In most patients it is only by huge doses of radiation that a cure will be accomplished. Such huge doses can be done with radium because of the narrow field treated, but x-ray to the whole true pelvis cannot be given to a quarter that intensity without danger of roentgen ulcer or even fatal roentgen sickness. Safe x-ray



dosage will almost always help, sometimes definitely relieve, but when we are aiming at possible *cure*, then it is radium we depend on. To my mind the important difference between radium and x-ray is not in quality but in distribution of energy.

We have been advising surgical treatment in all operable cases of carcinoma of the body of the uterus. Soiland and Costolow show results of radium treatment just as good and without the primary mortality. We are quite in agreement with their heavy dosage. We have given 4000 mg. hrs. in one dose, by stringing several radium tubes the whole length of the uterine and cervical canal.

We are also in hearty agreement with their policy of refusing to treat again for a very long time. One has the best chance to cure a patient the first time he treats her and if then he has given all that is safe and finds later that this did not in fact cure her, he should have the courage to admit defeat. It then becomes important not to do anything to increase her suffering—and repeated heavy radium doses are likely to cause much and persistent pain.

The statistical studies according to stage of disease and cell type constitute an important advance in our knowledge of carcinoma of the cervix. They have confirmed us, too, in our intention to treat all cases by radium, whatever the stage or type.

✽

LYELL CARY KINNEY, M. D. (510 Medico-Dental Building, San Diego).—The results presented in this paper further define the value of radium. It is only in carcinoma limited to the wall of the uterus that surgery claims results equal to those of radiation, but even in cases thus limited the surgical indication is restricted. Where there is advanced cell differentiation of Broders' classification 1 and 2, surgical cures approximate those of radium. In the more numerous Class 3, radium has twice as many cures as surgery and in the extremely malignant Class 4 radium is five to seven times more effective. Another determining factor in the choice of radium is Martzloff's experience, discovering carcinoma in the adnexae in 30 per cent of those cases that were clinically free from induration. These cases are inoperable, although clinically limited in extent. From these observations, the percentage of cases is extremely small where surgery may be chosen instead of radium.

Emphasis should be laid on the fact that operability must be determined at the first decision. An inoperable case does not become operable following the use of radium no matter how complete the apparent result. It is the extension into the broad ligaments and adnexae that contraindicates surgery at any time, and the fact of healing of the cervix does not diminish the danger of cutting into and liberating encapsulated and viable cells in subsequent operation. It is good judgment to use preoperative radium in clearly defined operable cases, but radium does not render a case operable.

The value of x-ray in conjunction with radium is still under discussion. The clinics presenting the best results are nearly equally divided, although their statistics are very similar. Ward and Farrar and Heyman do not use x-ray, while Bowing, Healy and Schmitz depend upon additional deep therapy. Measurements at the Memorial Hospital show that lethal doses of radiation do not reach the pelvis wall from radium applied in the uterus and fornices. The supplementary x-ray is logical. Our custom is to follow radium with deep therapy wherever there is definite broad ligament involvement.

We have made it a rule to follow our carcinoma cases very closely for a long time. Small local recurrences can be nipped with an implanted needle or small doses of radium in contact and extensive recurrence often prevented. Ward and Farrar attribute much of their extraordinary success to this procedure. When a recurrence is once established it is not only futile, but disastrous to repeat the original massive radiation.

Doctors Soiland and Costolow describe a technique that well represents the foremost thought of the day.

Their contention that radiation is the treatment of choice in all types of carcinoma of the cervix is logical and is forcefully presented.

✽

H. J. ULLMANN, M. D. (Cottage Hospital, Santa Barbara).—I was very much interested in Doctors Soiland and Costolow's paper, especially from the standpoint of technique, as we have been using the Radiumhemmet method for several years, but not long enough to make a statistical report. There is no question, however, but that our immediate effects are a great improvement over the older methods. With one or two exceptions we have been using the three application method rather than the two. A total dose of three treatments is 2520 milligram hours in the uterine canal, and 4680 milligram hours in the vagina. The first two treatments are given a week apart and the third treatment three weeks from the second. There is always a marked regression of the visible carcinoma seen at the last treatment. The intra-uterine applicator has a filter of 0.5 millimeter of silver plus brass one millimeter plus aluminum one millimeter, and contains thirty-five milligrams radium element. The vaginal applicator is a flat box covered with dental compound and designed so that it may be placed against the cervix. This point has the least thickness of the dental compound, and, therefore, the distance from tissue is also the least. The filtration here consists of 0.5 millimeter of silver plus lead two millimeters plus dental compound one to two millimeters, on the face, and a varying thickness on the sides, depending upon local conditions. This box is a centimeter square and contains sixty-five milligrams of radium element evenly distributed. No x-ray is used. In the event of recurrence in the parametrium or extensive pelvic infiltrations a totally different technique is used. This consists of broken doses of roentgen ray externally and radium internally, with the use of small doses of our lead compound intravenously to increase the sensitivity of the tumor to radiation. So far, this method has given splendid palliative results. I am glad that Doctor Soiland and Doctor Costolow placed emphasis on the present trend of therapy for carcinoma of the cervix, i. e., that radiation in place of operation is the method of choice for this condition in nearly all of the cancer centers of the world.

✽

DOCTOR COSTLOW (Closing).—We wish to thank the discussors of our paper, and note their general agreement.

We rely chiefly upon the heavy doses of radium in the treatment of carcinoma of the cervix, but have observed some cases in which additional x-ray was undoubtedly of much value in bringing about a five-year arrest. No bad effects have been noticed from the added x-ray therapy because we give it some time after, when the reaction from the radium is decreasing, and in this manner obtain the saturation effect of the radiation. It is difficult at present to determine the exact amount of added benefit of the additional x-ray but, even though it be small, the patient deserves all available aid in this serious condition.

Probably there is not a single medical condition in which there is more general agreement regarding the proper method of treatment than in carcinoma of the cervix. In practically all large hospitals and clinics throughout the world radiation has been rapidly accepted as the best method of treatment of all cases. Only a few European clinics, where a very few men have developed a highly skillful surgical technique, are still operating upon the early cases, and these men usually giving postoperative radiation treatment. When we see our own American surgeons in large clinics, as the Mayo Clinic, who have thoroughly tried radical operation and cautery, give up these operative measures and treat all their cases of carcinoma of the cervix by radiation, it certainly seems that the progress for the future in this disease must depend upon the further development of radiological instead of surgical technique.



# STENOSING TENDOVAGINITIS OF DE QUERVAIN\*

## REPORT OF CASE

By JAMES T. WATKINS, M. D.

AND

HORACE C. PITKIN, M. D.

San Francisco

ACCORDING to Schneider,<sup>1</sup> whose recent article is the first to describe this condition in the American literature, De Quervain's disease is not so uncommon, as is its diagnosis. Nevertheless the diagnosis offers no difficulties. Briefly summarized, the main features of the disease are as given below.

## HISTORICAL

The disease was first described by De Quervain,<sup>2</sup> of Basle, Switzerland, in 1895, who reported five cases.

Alfonse Eschle<sup>3</sup> collected one hundred and ten cases from the literature in 1924, adding nineteen cases of his own. Schneider<sup>1</sup> also added fifteen cases.

## SYMPTOMS

*Age:* Any. *Sex:* Males, 12½ per cent. Females, 87½ per cent. *Occupation:* Approximately 60 per cent maids and housewives. *Onset:* Usually gradual, occasionally traumatic. *Pain:* Localized in region of radial styloid (occasionally neuralgic in hand and forearm; aggravated by motions of wrist, but chiefly by abduction and extension of thumb). *Swelling and tenderness:* Localized to region of radial styloid. *Local heat and redness:* Never present. *Crepitation:* Was complained of in our case, though it could not be palpated by us. Schneider says, "never any crepitation." *Disability:* Often complete of affected wrist.

## SIGNS

*Swelling and Tenderness.*—Localized at point where the tendons of the abductor longus pollicis and the extensor brevis pollicis curve around the distal end of the radius.

*Limitation of motion* of wrist and thumb in varying degrees.

*Roentgenological Findings.*—Calcification of the periosteum where affected tendons pass over the radial styloid.

## PATHOLOGY

Etiology is unknown. Possibly repeated trauma of monotonous occupations may predispose.

Noninflammatory proliferation of connective tissue in middle layers of tendon sheaths at this point. Dorsal carpal ligament and periosteum may also be thickened. Lumen of tendon sheaths strikingly narrowed.

## TREATMENT

*Immobilization of thumb* by plaster of Paris cast of thumb and wrist. If not well in six to eight weeks:

*Operation.*—Simple longitudinal incision, without suture, of affected portion of sheaths, followed by early active motion. The various forms of physiotherapy are valueless except following operation.

## PROGNOSIS

Without operation, 70 per cent of the cases can be cured.

With operation, 99 per cent of the cases can be cured.

Full return of function after operation, two to three weeks; (industrial cases, four to six weeks).

## COMMENT

In the following report the most interesting features to us are:

1. The general surgeon who first handled the case missed the diagnosis, though he treated the patient for over one month.

2. So did the surgeon's roentgenologist.

3. So did both the authors.

4. So did their roentgenologist on two examinations.

5. The pathology found at operation was appreciated, and although not recognized as De Quervain's, appropriate treatment resulted in cure; rather to our surprise.

6. Diagnosis was made by survey of the literature only after patient's final discharge.

Therefore we feel that a clinical entity so easy of diagnosis, so disabling, and yet so amenable to treatment deserves more widespread recognition than apparently obtains at present in this country.

## REPORT OF CASE

William M., October 4, 1928.

*Chief Complaint.*—Pain on motion, and stiffness in left wrist.

*Present Illness.*—August 29, 1928, crate weighing two hundred pounds fell on left wrist. Continued working, but swelling appeared over lateral surface lower extremity left radius, and wrist became painful. So August 31, stopped working and went to Dr. R., who took x-rays, said "no bones broken" and put bandage on wrist. Patient bathed wrist in hot water at home. Did not work. September 20, Dr. R. splinted left wrist with anterior yucca board and ordered baking, massage, active and passive motion. This treatment continued every day to present.

*Present Status.*—Swelling still present; has never been discolored; is gradually decreasing in size, though very slowly.

Pain located at swelling, occurs only on active or passive motion; none at night.

Patient occasionally feels crepitus at the site of the swelling when thumb is moved.

*Physical Examination.*—Inspection: Localized swelling size of half-dollar lateral aspect lower extremity of left radius. No redness nor ecchymosis.

Palpation: Swelling is firm, attached to bone, has smooth sides, is only moderately tender, does not pit on pressure. No local heat. No tenderness elsewhere.

Manipulation: Extremes of any motion of wrist, particularly palmar flexion and radial flexion, cause slight pain at site of swelling; no crepitus felt. Compression of radius and ulna at mid-forearm causes no motion or pain at wrist.

Active motion: Pronation, supination, flexion of fingers, extension of fingers, normal; palmar flexion wrist, 45/60; dorsi-flexion wrist, 40/50; radial flexion wrist, 17/37; ulnar flexion wrist, 25/27; thumb to tips of fifth finger, normal; thumb to base of fifth finger, lacks one-half inch.

*Comment.*—Localized swelling, moderately painful, immediately following direct trauma done five weeks ago. Never discolored, therefore periosteum unbroken. Now shows a tumefaction attached to bone, firm, only moderately tender, without signs of inflammation or dislocation. Moderate limitation of motion, chiefly in those motions where the acting tendons pass over the swelling.

*Impression.*—Subperiosteal, ossifying hematoma.

*X-ray Report.*—October 5, 1928. "Roentgen examination of the left wrist showed well-marked irregu-

\* Read before the Section on Industrial Surgery of the San Francisco County Medical Society.

larity of lower end of radius. Apparently old healed fracture of lower end of ulna."

*Progress Note on October 15.*—After ten days of intensive physical therapy, the patient volunteers that he has seen some improvement, but at so slow a rate that it would be months before he would be cured. He is of the opinion that the mass beneath the abductors of his thumb will have to be removed before he can get relief. We would suspect a tenosynovitis if the pain were not so localized. Operation advised.

*Operation, October 17, 1928.*—1. Three and one-half inch longitudinal incision in anatomical snuff box of left hand.

The annular ligament was found to be several times thicker than normal, and on its central part presented a number of plates of what appeared to be cartilage. The sheaths of the tendons were split on the postero-external aspect where pain had been complained of when the hand was palmar flexed. This appeared to release them from tension.

2. A prominent piece of bone one centimeter by two centimeters was chiseled from the lower end of radius opposite the site of protested pain.

3. The wound was closed with light catgut and over it dermal. Plaster of Paris was not applied, nor was any immobilizing splint.

*Progress Note on November 20, 1928.*—This lad has done a good deal better than I had any reason to expect he would. The pain is all gone from his wrist; the motion has increased until it is almost normal; there is an area of numbness between the base of thumb and of first finger, apparently due to traction on the radial nerve at operation, and the swelling in the wrist has markedly diminished.

These results have come rather lately and I shall continue physiotherapy until the first of the month, at which time I hope to discharge him cured without disability excepting possibly for this little numbness at the base of the thumb.

*November 27, 1928.*—Patient discharged today having normal thumb and wrist motions in both hands.

909 Hyde Street.

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### HEMOCHROMATOSIS\*

#### REPORT OF CASE

By MILO K. TEDSTROM, M. D.  
Anaheim

**H**EMOCHROMATOSIS, variously known as bronze diabetes, pigmentary cirrhosis, and generalized hemochromatosis, is a chronic disease characterized by:

1. A peculiar discoloration of the skin due to iron-containing pigment, especially hemosiderin in the skin and various viscera.
2. Cirrhosis, especially of the liver and pancreas.
3. Slightly enlarged spleen.
4. In many cases a hyperglycemia, with or without glycosuria. The disease usually terminates fatally, in the end stages being accompanied by cachexia, anemia, acidosis, and possibly diabetic coma.

#### EARLY STUDIES

Troisier<sup>1</sup> in 1871 first described the disease, but it was not until 1889 that Von Recklinghausen<sup>2</sup> showed that the pigmentary changes

were due to the hemosiderin in the skin, and named this symptom complex "hemochromatosis." About one hundred cases, all adults, have been reported in the literature, only four or five of which were females. The majority of the cases were diagnosed postmortem.

The etiology of hemochromatosis is uncertain, but there are many theories. Many of the cases have a history of chronic alcoholism, but it is difficult to see how this could be a factor when we see many cases of alcoholic cirrhosis without the pigmentary changes. Mallory<sup>3</sup> has recently published considerable experimental and some clinical evidence to support chronic copper poisoning as the causative factor. He had several patients who gave a history of long-standing copper exposure. However, with the increased copper distillation of alcoholic beverages it seems that hemochromatosis should be very common now if copper were a factor. Mills is quoted by Coustam<sup>4</sup> as reporting that Koreans use brass vessels for cooking purposes, and there are few pigmentary disturbances among these people.

Hall and Butt<sup>5</sup> repeated Mallory's experiments and confirmed his findings. They believe that "a direct relation exists between the amount of cirrhosis of the liver and the quantity of pigment deposited." Flinn and von Glahn<sup>6</sup> repeated Mallory's experiments on rabbits, guinea-pigs, and rats and concluded that neither copper nor its compounds cause cirrhosis of, nor deposition of pigment in, the liver. They were able to produce pigment depositions in the liver of rabbits by feeding them an exclusive carrot diet.

#### ORIGIN OF THE PIGMENT

There are numerous theories as to the origin of the pigment. Some of them are: that some unknown agent acts on the blood causing the erythrocytes to give up their iron; that the autolytic function of the liver cells or spleen is impaired; that there is a decreased iron output by the kidneys and intestines; and that there is a primary cirrhosis of the liver with secondary pancreatic changes and skin pigmentation. Recent animal experiments by Rous<sup>7</sup> tend to show that the cirrhosis is the primary lesion. His experiments also tend to show that "while the increased destruction of red blood cells cannot be the primary cause of hemochromatosis, yet these elements are certainly the source of the hemosiderin." Many authorities consider that the pigmentation is primary, and leads to cirrhosis of the liver and pancreas. The case reported seems to have had a primary skin pigmentation change followed by cirrhosis of the liver and spleen. As the iron deposits are increased in the cells normally metabolizing iron, it would seem that the initial lesion is a failure of organs which normally take care of the products of blood destruction to do so. Sprunt<sup>8</sup> and others have advanced this theory. Gaskell and others<sup>9</sup> have found an increase in iron content of blood with defective iron elimination.

#### SYMPTOMS

The onset of the disease is usually gradual. Quite frequently the patient presents himself with the typical symptoms of diabetes, that is polyuria, polydipsia, and polyphagia. Others have not re-

\* From the Department of Internal Medicine, Johnston-Wickett Clinic, Anaheim.



covered their health following an acute infection. It seems strange that so many of the patients have not noticed the discoloration of the skin until their attention is called to it by their physician. The usual symptoms complained of are: general malaise, weakness, loss of weight, and some epigastric discomfort, especially nausea and vomiting, constipation, loss of appetite, and occasional swelling of the abdomen. Examination usually reveals a malnourished individual with dry skin. The discoloration is variously described as grayish brown, gray black, blue black, dirty gray, or brownish gray, and affects the greater part of the body, being less marked around the axillae, areolae, and genitals. The liver is smoothly enlarged; ascites is present; and the spleen is usually palpable. Occasionally purpuric spots or petechiae are seen. Slight jaundice has been noted. The laboratory tests usually reveal glycosuria, hyperglycemia, some albumin and a few casts, and normal erythrocytes and leukocytes with normal differential. The urobilin is not increased in the blood and there is no bile in the urine.

#### DIAGNOSIS

The condition must be differentiated from Addison's disease, which it suggests due to the pigmentation of the skin. The absence of pigmentation in the mucous membrane of the mouth, normal or elevated blood pressure, and enlarged liver, all serve to differentiate the case from Addison's disease.

Argyria occasionally may be confounded with it, but the history and hepatic cirrhosis will rule it out. The finding of hemosiderin in a section of skin removed by biopsy, and in the urinary sediment, is diagnostic of hemochromatosis. The pathologic examination reveals cirrhosis of the liver, pancreas and lymph nodes, with much iron-containing pigment. This pigment is also observed in the kidneys, adrenals, and entire gastrointestinal tract. The spleen is large, hard, and dark in color. The skin, of course, has iron pigment present, chiefly around the sweat glands.

The results of treatment are very unsatisfactory. The patient should have general measures to improve his health and prevent secondary infections. Diabetes, if present, should be treated. However, Coustam<sup>4</sup> has reported a case with diabetes and acidosis that was refractory to insulin.

#### REPORT OF CASE

29229, forty-six years of age, male, entered the hospital on December 23, 1928. His chief complaint was swelling of the abdomen. For the past year he had noted gradual loss of weight and strength, and had had some nausea at intervals. About October 23, 1928, he had had general aching, malaise, and fever, which he thought was "flu." He recovered after one week. While lifting acetylene tanks on November 20, 1928, he suddenly had severe mid-epigastric pain, which cleared up after a short while. Since that time he had had intermittent dull pain in the epigastrium, especially during the past two weeks. Two weeks before he entered the hospital he noted enlargement of his abdomen. This enlargement had progressively increased. At the time of his entrance he was having dull epigastric pain (chiefly on the right), orthopnea, dyspnea, tachycardia, and considerable enlargement of the abdomen. On being questioned, the patient said he had noted discoloration of the skin for the past year; his family physician had noted it for three years.

*Past History.*—Scarlet fever at six years of age. Gonorrhea at eighteen years of age. The patient denied lues. He had been a chronic alcoholic for the greater part of his life. He had worked around brass for the past fifteen or twenty years.

*Family History.*—Essentially negative.

*Physical Examination.*—The patient was greatly emaciated, very orthopneic, and dyspneic. There were blackish brown discolored areas of skin with normal areas in their midst. These were chiefly over the chest, axillae, back, inguinal regions, inner sides and front of thighs, and buttocks. The facial appearance was somewhat mask-like, without expression. The blood pressure was: systolic, 130; diastolic, 90. Examination of the heart was negative. Examination of the lungs revealed a few crepitations at the bases posteriorly. The abdomen was enormously distended, with prominent superficial veins. There was shifting dullness in both flanks, and a fluid wave on both sides. After paracentesis the liver edge was felt three finger-breadths below the costal margin, firm and smooth. The spleen tip was also palpable.

*Laboratory Reports.*—Urine: Trace of albumin; occasional hyaline casts; sugar, urobilin, and indican were negative; urine sediment showed hemosiderin.

Blood: Hemoglobin, 48 per cent (Newcomer); red blood cells, 2,480,000; white blood cells, 6000. Differential: Polymorphonuclear leukocytes, 82 per cent; lymphocytes, 18 per cent. Nonprotein nitrogen, 17.5 milligrams. Blood sugar, 109 milligrams. Blood Wassermann: negative. Sugar tolerance: normal curve.

Gastric analysis: Free HCl, 24°; total acid, 58°.

Ascitic fluid: Albumin, four plus; specific gravity, 1.010; microscopic, negative.

Fragility test: Hemolysis begins at .40 per cent and is complete at .30 per cent.

Van den Bergh reaction was direct. Serum bilirubin was estimated as 2.3 milligrams for each 100 cubic centimeters.

Section of skin removed by biopsy showed hemosiderin in great quantities, especially around the sweat glands.

Section of liver removed at time of omentopexy showed considerable destruction of liver cells with replacement by scar tissue. Abundant iron-containing pigment was also present.

#### COMMENT

This patient had considerable ascites which was only slightly benefited by the administration of ammonium chlorid and novasurol. An omentopexy was decided upon and was done under local anesthesia on January 22, 1929 by Dr. Herbert A. Johnston. Since that time the patient has had only one tapping (in five months), whereas previously he had required almost daily paracentesis. The spleen is no longer palpable, and the liver is smaller although still palpable. There is no evidence of ascites at present. The patient has regained his strength and has returned to his work. The relief of his ascites has apparently made him as well, physically, as before the onset of the disease. He has not yet developed hyperglycemia or glycosuria. Although his pigmentation is unchanged, we feel that omentopexy has been of decided benefit to this patient. Since writing the above the patient has been seen, and his abnormal pigmentation is much less, and the liver is smaller.

#### SUMMARY

A case of hemochromatosis, proved by the findings of hemosiderin in the skin, in the urine sediment, and in the liver section removed at time of operation, is presented.

This patient has a history of both chronic alcoholism and possible chronic brass poisoning, both

of which are theoretical causes of hemochromatosis.

Omentopexy was done on this patient with remarkable improvement in his condition, so much so that he was able to return to his work. The literature does not reveal any previous case of hemochromatosis having an omentopexy for relief of the ascites.

The history suggests very definitely that the pigmentary change was the primary lesion, being followed by cirrhosis of the liver and ascites.

117 N. Claudine.

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### FOREIGN BODIES IN THE URETER\*

#### REPORT OF CASES

By WILLIAM E. STEVENS, M. D.  
San Francisco

DISCUSSION by Charles P. Mathé, M. D., San Francisco;  
W. W. Cross, M. D., Oakland; Robert V. Day, M. D., Los Angeles.

FOREIGN bodies which have been introduced from outside the body are rarely found in the ureter. No mention of this condition is made in the majority of the recent books on urology. Hugh Cabot<sup>1</sup> cites but one case, that of a male patient who was seen some years ago by the late A. T. Cabot. A long straw had entered the right ureter, having been inserted, doubtlessly, into the urethra. The lower third of the straw projected into the bladder and was removed with a lithotrite.

#### CASES REPORTED IN LITERATURE

In the majority of the very few cases reported in the literature the foreign bodies consisted of a fragment of catheter which had broken off in the ureter. Young<sup>2</sup> states that this type of accident is extremely rare and that if a catheter does break in the ureter it will probably be expelled. The only instance of a foreign body in the ureter mentioned by him is the case reported by Cabot.

Augustus Riley<sup>3</sup> recently reported a case in which one inch of a spiral filiform tipped catheter which had been used to get by a stricture in the lower third of the right ureter doubled on itself and was broken off. It was eight weeks before Riley was able to remove the fragment and it was then found to be encrusted with a soft stone

three-quarters of an inch long and one-quarter of an inch in diameter.

Strominger and Blum<sup>4</sup> report the very interesting case of a man thirty-seven years of age who complained of frequent urination, pain at the beginning of urination and cloudy urine. The bladder capacity was reduced to 120 cc. Temporary improvement followed instillations of protargol solution and treatment at mineral springs but finally fever appeared, the vesical symptoms increased in severity and the patient complained of severe pain in the right kidney region. Examination revealed a stricture in the bulbous portion of the urethra, marked inflammatory lesions of the bladder and an impassable obstruction in the right ureter ten cm. from the uretero-vesical orifice. The bladder contained a calculus the size of a nut. The patient was not seen again for three months. The bladder symptoms were then still more pronounced. Because of the marked reduction in bladder capacity and the fact that the urethra could not be dilated it was decided to perform an open operation. In addition to the vesical calculus seven cm. of a ureteral catheter were found projecting from the right ureter. That portion of the fragment of catheter remaining in the ureter measured twelve cm. in length. At the ureteral orifice the catheter was surrounded by a small calculus. This fragment of catheter had been in the ureter for over one and one-half years. It was permeable and there was no dilatation of the kidney pelvis.

These same authors state that they know of one case in which a fragment of catheter fifteen cm. long was lost in the ureter during catheterization. It was removed four days later through an iliac incision.

Schlagintweit<sup>5</sup> reported a case of foreign body which he believes had remained in the left ureter for from ten to fifteen years. The patient had suffered from pain in the left reno-ureteral region for many years. Examination revealed pyonephrosis of the left kidney. Radiography showed a calculus in the lower third of the ureter from which a thin hook-shaped formation projected like the stem of a pear. After removal of the pyonephrotic kidney the ureter was incised and the calculus together with a hook-shaped piece of wire was extracted. No periurethritis or scar tissue were found at the site of the foreign body and stone but the ureter was hypertrophic and dilated. The author was unable to explain how the wire, bent at a right angle at its lower end, could have entered the ureter.

Galland<sup>6</sup> reported the remarkable case of a man forty-two years of age who inserted the horn stem, eight cm. long and eleven mm. in circumference, of a tobacco pipe into his urethra. After passing into the bladder it had probably been forced by contraction of this organ into the right ureter for a distance of two cm. Its extremity perforated the wall of the ureter and the patient died fourteen days later.

Galland also mentions a case recorded by Bayle in 1686 in which a pin was found imbedded in the wall of the ureter. It was impossible to determine

\* From Stanford University Medical School.

\* Read before the Urology Section, California Medical Association, at the Fifty-eighth Annual Session, May 6-9, 1929.



whether the pin had entered the ureter from the bowel or through the bladder.

In a case recorded by Peirce a spiral shell was found in the ureter.

Cases of foreign bodies ascending the entire length of the urinary tract from the external urethral meatus to the pelvis of the kidney are rare. In this connection, one recently reported by T. P. Waring,<sup>7</sup> is of interest. A blade of grass passed from the urethra of a man thirty-eight years of age into the bladder and thence through the ureter to the pelvis of the kidney. Waring believes that strong antiperistaltic ureteral waves forced the grass upward to the renal pelvis. I believe that regurgitation should also be considered as a factor in this case. Alexander H. Peacock<sup>8</sup> calls attention to the fact that Lewis and Goldschmidt produced reverse peristalsis by filling and stimulating the bladder. This was accompanied by reflux of fluid from the bladder to the kidney. Foreign bodies which enter the ureter directly from outside the body usually travel downward toward the bladder.

#### REPORT OF CASES

**CASE 1.**—A married woman forty years of age complained of pain in the right upper abdominal quadrant radiating to the back. This had begun three months before coming under observation but had increased in severity during the past two days. She also suffered occasionally from nausea and vomiting after meals; loss of weight. The right ovary and appendix had been removed ten years previously. Palpation revealed a slightly enlarged right kidney which descended into the right lower quadrant on deep inspiration. The characteristic pain was reproduced by pressure on this organ. A catheterized specimen of bladder urine contained an occasional group of pus cells but was culturally negative. The kidney function was normal. A number six ureteral catheter encountered some resistance about six cm. from the uretero-vesical orifice. Partial relief from pain followed the first catheterization. Pyelography revealed moderate dilatation of the renal pelvis.

**Diagnosis.**—Stricture of the right ureter and hydronephrosis. Marked relief followed a few dilatations with bulbed catheters. Following one of the dilatations about three cm. of the catheter, including a number fourteen bulb, broke off in the ureter. A number of attempts to extract this fragment were unsuccessful but following pyelography six weeks later it was passed by the patient. The catheter was permeable and pyelograms now showed but slight dilatation of the kidney pelvis. Notwithstanding the presence of the broken catheter in the ureter for several weeks the pain had been absent for over two months.

**CASE 2.**—A man fifty-six years of age complained of pain in the right lumbar region and frequent urination. A catheterized specimen of bladder urine contained about twelve pus and blood cells to the high power field. Radiographs with opaque catheters in the ureters revealed a calculus in the right ureter at the pelvic brim. Calibration of the ureters showed a stricture just below the stone. The ureter was noticeably dilated above this point, although the pelvis of the kidney was of normal size and contour. After several dilatations of the ureter, followed by the injection of olive oil, the calculus escaped into the bladder and was passed with the urine. A Walther flexible metallic bougie was then inserted for the purpose of further dilating the stricture. Unfortunately the filiform became detached and remained in the ureter. Numerous attempts to remove the filiform by means of various recognized procedures were unsuc-

cessful and incision of the ureter following extra-peritoneal exposure finally became necessary.

#### COMMENT

This second case demonstrates the danger attending the use of the above type of dilators. I now use Blasucci or Garceau catheters and consider the former superior to bulbed catheters and bougies or any other type of instrument for ureteral dilatation.

#### SYMPTOMS AND TREATMENT

The symptoms of other foreign bodies in the ureter are similar to those produced by calculi. The treatment is likewise the same in the great majority of cases. Conservative treatment by cystoscopic methods is first indicated but severe pain, complete obstruction of the ureter, infection, or progressive dilatation of the kidney pelvis demands early operative procedures.

#### SUMMARY

Foreign bodies with the exception of stones are rarely found in the ureter. They may enter the ureter directly from outside the body or from the kidney, intestines, or bladder. The latter route is far more common. Contraction of the bladder or regurgitation may force or carry a foreign body from the bladder into the ureter. It may then travel upward as high as the pelvis of the kidney as a result of ureteral antiperistalsis and regurgitation.

Catheters, bougies and other instruments should be carefully examined for imperfections before they are inserted into the ureter.

One should hesitate before employing ureteral instruments with detachable parts and the greatest care should be exercised in their manipulation.

Flood Building.

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#### DISCUSSION

CHARLES P. MATHÉ, M. D. (760 Market Street, San Francisco).—Doctor Stevens has called our attention to the danger of breaking and leaving pieces of a catheter in the ureter in making routine treatments of pathological conditions of the kidney and ureter. I feel that the accident of breaking a catheter in the ureter can be avoided by employing new catheters with no defects. One must not forget that the ureteral catheter is constructed of gum and silk. When the catheter becomes old, slight forcing will cause the gum to crack thereby allowing solutions to come in contact with and to disintegrate the silk threads. Such a catheter will break readily, particularly if it is

caught in a tight ureter or if it forms a loop within an enlarged ureter. A great number of these accidents can be avoided if catheters will be discarded when they are defective or have disintegrated with age.

❧

W. W. Cross, M. D. (1624 Franklin Street, Oakland).—Ureteral catheters, when passed, may turn back when the pelvis is reached and the point go down the ureter. In this manner a loop is made and upon withdrawing the catheter it will come down doubled upon itself. If the catheter is not strong it may break. In dilating ureteral strictures Doctor Hunner used beeswax and oil. The oil is not required and may destroy some of the adhering quality of the wax, so that it may come away and be left in the ureter. The wax should be melted in a wax spoon and flowed on the catheters and cooled in the air. Moisture on the catheter may prevent proper adhesion, so that the catheter must in every instance be dry.

I have observed foreign bodies in the bladder on several occasions but never had the experience to see them go up the ureter. Recently a Chinaman came to the clinic at the prison with chewing gum in the bladder.

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ROBERT V. DAY, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Stevens is to be congratulated on his report of these cases. Searching the literature takes an immense deal of work. Most of us I think have seen few, if any, foreign bodies except stone in the ureter. One should always discard an imperfect ureteral catheter—especially one which bends at the eye when the point is being introduced into the ureter. I agree also that the Blasucci is the ideal instrument for dilating the ureter.

## THE LURE OF MEDICAL HISTORY

### A NOTE ON THE MEDICAL BOOKS OF FAMOUS PRINTERS\*

#### PART II

By CHAUNCEY D. LEAKE, Ph. D.  
San Francisco

#### THE MOST BEAUTIFUL BOOK

CONNOISSEURS have frequently discussed the most beautiful book ever printed without considering the merits of Vesalius' masterpiece, the *Fabrica de corporis humani libri septem*, published by Operinus from Basle in 1543, and republished by him in still more beautiful format in 1555. Perhaps because it is supposed to be a purely technical medical book it is not to be considered beautiful. But it is, in fact, a landmark in fine printing as well as in science. As it was the first modern medical book, the foundation, indeed, of modern medicine, so it established new criteria of excellence in the superb typography and in the judicious composition of its pages. The initial letters are a delight; the illustrations are the superlative woodcuts of the drawings made by Titian's pupil, Jan Van Calcar, and the illustrations and type are so arranged on the wide-

\* This preliminary study was inspired by the notable collection of medical classics exhibited by Dr. LeRoy Crummer at the University of California Medical School in February, 1929. Helpful stimulus has also been received from conversations with Dr. Sanford Larkey. It is hoped that their influence may maintain a lively interest in some of the more artistic aspects of medical publication among California physicians. Part I was printed in the January issue.

margined folio pages as to give the most pleasing sense of balance and proportion.

Andreas Vesalius (1514-1564), the swash-buckling young Belgian, wrote this book when he was only twenty-seven or twenty-eight years old, although he had already been professor of anatomy and surgery at Padua for two years. It was here that he reintroduced actual dissection in anatomy, and so brilliant were his lectures that students from all over flocked to his squalid little amphitheater. The title page of his *Fabrica* shows him lecturing in a splendid big hall, but this was pure propaganda, as he was trying to show by such a title page that he really deserved a dignified lecture hall. As frequently happens in such university efforts, he didn't get it, and soon after deserted his work to become court physician to Charles V and Philip II of Spain.

Fortunately, in deciding to publish a real anatomical text glorifying the human body as not even Flo Ziegfeld has done, Vesalius selected a real artist to make his plates and one of the best printers in Europe to publish the book. Both men were his friends and apparently put their best into the effort. The result is, without question, the finest medical book ever published and certainly one of the most beautiful books of all time.

#### OTHER FAMOUS SWISS PRINTERS

In Basle also were many other great printers who tempered the practical aspects of their German training with the more delicate and graceful artistry of the Italian and French masters. Of these, Froben, with his staff and serpents, issued many medical items of importance. His great six-volume *Opera Omnia* of Galen, with the annotations of Vesalius connected with some of the chapters, was published in 1542. But his splendid Greek text folio of Hippocrates, with the authoritative readings of Cornarius, and the superb typography, was his real triumph in medical literature. It was printed in 1538, and long remained standard.

Froben derived his skill from the worthy Cratander, his immediate predecessor, who also issued several of the better known works of Galen, among them being the *De usu partium*, the standard physiological treatise of the time, in 1533.

#### SOME GREAT GERMAN PRINTERS

During the fifteenth and sixteenth centuries, German printing was among the best and most interesting in Europe. It was especially influential in introducing books in the people's tongue. This resulted in widespread use and study of the books, so that most of them have truly been worn out of existence. These early German books, printed in the vernacular, are among the rarest of all books, and are eagerly sought by collectors.

Some of the early ones of this sort were "herbals"—that is, illustrated botanical books, most of them showing plants of medicinal use. The pictures were often very beautiful, and frequently quite accurate. Many of them had been



taken from early manuscripts, however, and were slavish imitations of imaginary plants, and of little value. With the printing of Latin translations of Dioscorides, however, better care was taken to see that the illustrations conformed to the high value of the text.

One of the best early editions of Dioscorides' *De medicinali materia libri sex*, is the 1543 folio published by Egenolff of Frankfurt. This was the translation of Ruellius, and contained Walther Ryff's notes. Since the cuts used were copied from Fuchs' *Historia stirpium*, and since Ryff made some rather slighting remarks about Fuchs, this book initiated one of the first famous book controversies, involving plagiarism, the rights to illustrations, and the like. Egenolff also published in 1545, in folio, Walter Ryff's intriguing *Frauen Rosengarten*, with the amazing woodcuts. This was the first obstetrical text, and was issued for popular use, as indicated by the use of the vernacular. Another excellent medical text from Egenolff's press was the octavo *Klein Wundartznei* of the French surgeon Lanfranchi, issued in 1569.

Another great Frankfurt printer was S. Feyerabend, who published several of the startling tracts of Paracelsus in German, such as his *Wundartznei*, with the fine woodcuts of J. Amman, in 1565. Feyerabend also employed Amman to illustrate another important obstetrical work, the *Hebammen Buch* of J. Rueff, which appeared in quarto in 1580, and later for professional use in Latin as *De conceptu et generatione homini* in 1587. This work has many remarkable illustrations of obstetrical practice.

With the advent of the terrible Thirty Years War, all intellectual activity in Germany ceased, and fine printing has only developed again in that country within the last century.

#### THE GIUNTA PRESS

During the sixteenth and early part of the seventeenth centuries, several printers, notably Christian Wechel and the Giuntas, seemed almost to specialize in medical books. The Giunta Press flourished for a time in Florence, and then was transferred to Venice. It has sponsored more of the great classics of antiquity in medicine than almost any other press.

Specially renowned are its nine great folio editions of Galen's *Opera*, extending for more than a century. This series used the best translations of the different books, and the number of times it was reprinted is proof of its success. The typography is in the finest Italian tradition, with finely proportioned composition, so that the wide-margined folio pages are a delight to examine. The title page has become quite famous because of the historiated woodcut border showing imaginary scenes in the life of Galen. The peculiar costumes worn by the physicians in the pictures and the quaint attitudes assumed by them are very charming. In the bottom scene Galen is demonstrating the function of the recurrent laryngeal nerve on a pig, and in another scene

#### ANDREAE VESALIUS

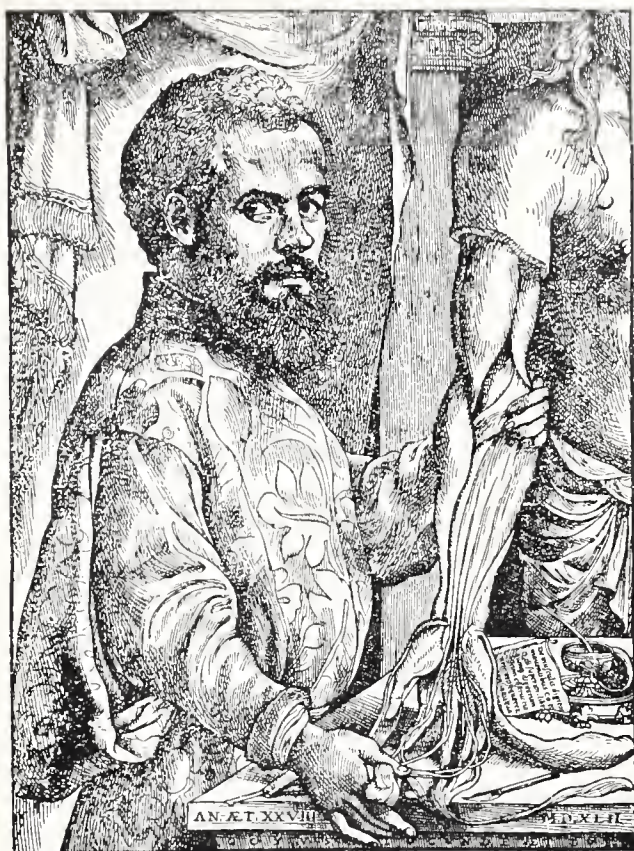


Fig. 7.—Woodcut portrait of Vesalius by Calcar, in the 1543 edition of the *Fabrica*, one of the finest books of all time.

is bewildering his chief professional rival in consultation.

Another fine production of the Giunta press is the folio Avicenna, *Liber canonis medicinae*, published in 1527, which contains all the huge compilations of the ancient medical writers made by the great Arab. A very fine quarto from the Giunta press is the *Opera Omnia* of H. Fracastoro of Verona, issued in 1555. This contains the celebrated poem describing the symptoms and treatment of, and giving the name to, syphilis. It also contains the interesting notions of the author on contagion, of which the Singers have written so charmingly in the first issue of *The Annals of Medical History*.

#### CELEBRATED DUTCH PRINTERS

Taking as a device a hand from the sky holding a pair of dividers, Christopher Plantin of Antwerp upheld in Holland during the sixteenth century the high standard of printing established in Italy and France. He issued many finely illustrated botanical works, and a few books of medical interest. Among them were J. Grevin's *De venenis libri duo*, a beautiful quarto of 1571, and the *De natura hominis* of Nemesius Episcopus in 1565. This latter little octavo is supposed to contain a passage describing the circulation of the blood.

The most famous Dutch printers belonged to the Elzevir clan. This prolific house made Leyden one of the book centers of the world, even rivaling the great annual Frankfurt book market, to which before the Thirty Years' War all publishers sent their wares. Many collectors make



Elzevirs their special hobby, and the finely bound little volumes are always found carefully preserved. The device of the Elzevirs was a man standing under a tree with the motto, "*Non solus*."

Among the many great medical classics published by the Elzevirs, the most interesting is William Harvey's *Exercitationes de generatione animalium*, published in 1651 in 12mo, and in a rare variant carrying a reduced engraved title page of the first O. Pulleyn London imprint of the same year. This great book was secured by George Ent, Harvey's friend, for publication, and it yet remains to be adequately studied and appreciated. It is the best commentary there is on Aristotelian ideas on embryology. Harvey's own contribution was brought to a standstill, as in the case of his demonstration of the circulation of the blood, only because of inadequate technical help in the form of a microscope.

Another fine Elzevir is J. B. Van Helmont's *Ortus medicinae*, published in quarto in 1652. This contains much of the great mystic's speculation on the function of fermentation, and his stimulating theories on gases. The Elzevirs also issued a very fine little Celsus in 16mo in 1657. The first popular physiological treatise, which successfully introduced Harvey's ideas to the public, and which began experimentation in nerve-muscle physiology, was René Descartes' *Tractatus de homine et de formatione foetus*. This was published by the Elzevirs in a handsomely illustrated quarto in 1677.

Perhaps the best known medical painting is the Rembrandt showing Dr. N. Tulp demonstrating the muscles of the arm of a cadaver to some of his ruff-collared Burgemeister friends. The Elzevirs published his *Observationes medicae*, with fine copperplate engravings in 1672, in octavo.

With the introduction of copperplates, the old charm of the woodcut disappeared from printed books, and the elegant typography of the seventeenth century was developed with special reference to its harmony with the coppers. Some of the finest books of all time were printed by the Dutch printers for the anatomical atlases of Albinus and his contemporaries. These books, mostly by Verbeek, and with the coppers by VandeWar, are still worth most careful study by those wishing to know anatomy as it may best be pictured.

#### EARLY ENGLISH PRESSES

The publications of the early English presses were mostly in the vernacular, and were so used as to have practically disappeared. The first English printed medical book was *A Passing Gode Lityll Boke Necessarye and Behovefull Agenst the Pestilence* issued in 1485, it is said by William Caxton, but according to Garrison, by William de Machlinia. Caxton published *The Governayle of Helthe* in 1491. Wynkyn de Worde published the first medical picture in England. This was a dissection scene from Bartholomaeus Anglicus' *Encyclopedia* issued in 1495. In 1510 Wynkyn de Worde printed *The Judycyal of Urins*. The first English anatomical text was Thomas



Fig. 8.—Title page of Walter Ryff's *Frauen Rosengarten*, published by Christian Egenolff in Frankfurt, in 1545.

Vicary's *The Englishman's Treasure*, London, 1548. These books were not well printed, but because of their rarity are extremely valuable.

One of the great early London printers was Thomas Berthelet, whose bindings in black calf are most precious. In 1541 he issued in quarto Sir Thomas Elyot's *The Castel of Helth*, a book which had a deserved popularity. Written by an interested layman, it was bitterly resented by the profession, but undoubtedly had much influence in improving the sanitary conditions and dietary habits of the masses.

One of the interesting English printed books of the early seventeenth century is *The Workes of that Famous Chirurgeon Ambrose Parey*. This is a folio issued in 1634, and, it is said, by the printers of the first folio Shakespeare, Thomas Cotes and R. Young of London. It is also said that the first folio Shakespeare, published in 1623, carried a notice of the forthcoming appearance of this English translation of the works of Paré. Paré's first publications were little octavos issued in French for the guidance of the struggling lay-surgeons of the time. So useful and handy were these little volumes that they have practically been worn out of existence. The English of this 1634 edition is in the virile Tudor style, and it is stimulating and entertaining reading although not well printed. Paré's *Little Journeys* is a classic in narrative.

#### THE REVIVAL OF INTEREST IN GOOD PRINTING

During the latter part of the seventeenth century and the early part of the eighteenth, interest in good printing waned. The times were too



turbulent, perhaps, for good work to be done in this rather artistic and intellectual field. There were many printers, of course, but none of them were outstanding, and very few of their works have any artistic value. William Caslon, an English type founder, stabilized the many different forms of Roman type, and evolved what has since become known as Caslon Old Style type, the standard type for publications of today. It is a plain, sturdy, type font, and very flexible in regard to the ease with which different letters may be combined and yet maintain good proportions. This is one of the most difficult aspects of typography and composition. Individually each letter may be perfectly proportioned in the style in which it is made, and yet when placed next to other letters the effect is not very artistic. Caslon worked out a rather simple set of type fonts which quite satisfactorily meet most demands of good modern printing.

A revival of interest in good artistic printing began about the same time in England and in Italy. In England the famous press of John Baskerville at Birmingham began to apply Caslon's work, and to use artistic discrimination in the setup of pages in order to secure a harmonious and pleasing ensemble. The only medical work issued by this press was William Hunter's royal folio, *Anatomia uteri humani gravidi tabulis illustrata*, published in 1774. The magnificent thirty-four plates accompanying the text have never been surpassed for accuracy and beauty of delineation.

In Italy, Giambattista Bodoni established at Parma his famous press, which began to experiment with entirely new decorative types having no traditional background. These developed grad-

ually into the fluted and blocked letters used now for display purposes. When artistically composed on fine grade paper, with proper borders, they form a most charming effect.

The best medical work from this modern press is Zaccarelli's Italian translation with Latin text of Fracastoro's poem on syphilis. This was published in folio in 1829, and has been hailed as one of the best productions of the Bodoni press.

Another very influential modern press was that of the "English Aldus," William Pickering of London. Two of his medical productions are famous. In 1833 he issued Sir Charles Bell's *The Hand*, one of the most beautifully printed and illustrated monographs which has ever been published. Some time later Pickering brought out one of the most lovely little editions of the *Religio Medici* of Sir Thomas Browne—Osler's favorite book.

#### THE PRESENT OUTLOOK

There is now a great deal of attention paid to the physical characters of the printed book. Modern printers and publishers are trying hard to see that the best and most artistic efforts are put into their publications. This is reflected in medical books.

In the United States there have been many interesting printing efforts. Benjamin Franklin's are celebrated. He issued one or two little medical items, a famous one being Cadwallader's *Essay on the West India Dry Gripes*. During the long sterile period of the eighteenth century, no distinctive printing work was done in this country. Since William Morris' Kelmscott press, however, and the amazing simplicity of Cobden-Sanderson and the Doves press in England, there has developed a fine appreciation in America for good printing. One of the great typographers of the world has done his best work here, and Bruce Rogers' name in connection with a book is assurance that typographically it will be as nearly perfect as possible. Paul Hoeber of New York, who devotes himself exclusively to medical publishing of the finer sort, has employed T. W. Goudy to design the type for his *Annals of Medical History*, the finest printed of all medical periodicals, and for many of his better books.

A deliberate effort to print worthwhile medical books in pleasing and attractive style has been inaugurated by Charles C. Thomas of Springfield, Illinois. Inasmuch as Mr. Thomas is also trying to publish his books at as reasonable a price as possible, his effort deserves more than passing support. Many of the great university presses have published medical books with due regard for the canons of good taste which they have established. The current German medical publishers are doing superb work, but they are making it difficult for the average individual to secure their publications because of the exorbitant prices they are demanding.

In connection with the tercentenary of William Harvey's demonstration of the circulation of the blood in 1928, the Nonesuch Press issued a reprint of the first English translation (1653) of the *De Motu Cordis*. This was edited by Geoffrey



Fig. 9.—Title page of one of the many famous medical books published by the renowned Elzevirs of Holland. Nicolaus Tulp was the subject of Rembrandt's well-known "Anatomy."



Keynes and published in a handsome binding with a special Dutch typography. As far as I know, this has been the only medical publication of any of the modern private presses. Some of the most famous private presses in the world are in San Francisco, but none of them seem to have issued a book of medical interest. The Stanford University press has just issued, in beautiful format, Doctor Casey Wood's translation, with annotations and reproductions, of the *De Oculis* of Benevenutus Grassus of Jerusalem. This early ophthalmological treatise was first published in 1478 at Ferrara and, while very significant, is extremely rare. Here is a splendid beginning for the elegant printing of medical books on the Pacific Coast.

Interest in the format of a book is one of the pleasant little bypaths of bookish lore. Behind every book there is a story—a story of the author, of the printer, and of the period, and often these little stories are more entertaining and significant than the book itself. At any rate, it is worth while to pay some attention to the artistic qualities of books.

University of California Medical School.

Note: Pictures of the title pages of many of the books mentioned above may be seen in Sir William Osler's *Evolution of Modern Medicine*, New Haven, 1920. In the huge catalogue of his library, compiled by W. W. Francis, Archibald Malloch, and L. L. Mackall (*Bibliotheca Osleriana*), one may find interesting notes on many of the significant finely printed medical books. One may also turn to the many beautiful catalogues issued by Maggs Bros. of London, R. Lier of Florence, and Hertzberger of Amsterdam, for items about the medical books of the famous presses of the world.

## CLINICAL NOTES AND CASE REPORTS

### TOXIC AMBLYOPIA

#### REPORT OF CASES

By EARLE L. CREVELING, M. D.  
Reno, Nevada

AMBLYOPIA is derived from two Greek words: "amblys," meaning blunt; "opsis," meaning sight. Toxic amblyopia is a condition that is becoming more common on account of the excessive use of tobacco during youth and by women, and also because of the use of methyl alcohol, or of a poor grade of ethyl alcohol or redistilled denatured alcohol. These latter are perhaps less harmful than cigars, strong pipe tobacco or snuff. The excessive smoking of cigarettes probably saturates the system with harmful poisons of tobacco. The use of poisonous alcohol is far greater than is generally realized, as is attested by gastric, hepatic, nephritic, and ocular lesions due to its ingestion.

Of the substances enumerated, tobacco is the one most often responsible for amblyopia. As the users of tobacco are also frequently consumers of alcohol, it is difficult to separate the etiologic influence of these two drugs. Hence the name intoxication or toxic amblyopia is used to describe a central amblyopia.

This condition is almost always bilateral, although there are a few doubtful cases on record of it being unilateral. The characteristic of the

scotomata of toxic amblyopia is a centrocecal imperfection with drooping margins, pericentral in location, and containing one or two spots of greater vividness. The imperfection for the color red is far more than that for white. These findings differentiate it from the other toxic scotomata in the central area of the field.

The pathologic lesion, according to Uhthoff, is an interstitial inflammation of the papillomacular fibers of the optic nerve. These fibers, traced by means of their degeneration, consist of a bundle shaped like a triangle, with their base in the lower and outer part of the nerve, and their apex at the central vessels. Gradually the bundle passes to the center of the nerve, which it reaches in the optic canal, and finally it can be followed into the chiasm and tracts. Nuel and others believe that the so-called central toxic scotoma is not caused primarily by neuritis of the macular bundle, but signifies a disease of the macula lutea, causing degeneration of its cells; and that the optic nerve changes are secondary to destruction of the nerve cells in the macula. Birch-Hirschfeld believes that there is a primary involvement of the nervous elements of the nerve and retina, with an accompanying proliferation of the glia and increase in the connective tissue. The course is a chance one, but the prognosis of the tobacco and alcoholic types is good, provided treatment is started before the disease is too far advanced.

*Treatment.*—Total abstinence from the use of alcohol and tobacco. Later, strychnin, pushed to its physiological limit. For absorption of inflammatory products, potassium iodid, free sweating, purgation, and the drinking of copious quantities of water are indicated.

#### REPORT OF CASES

CASE 1.—Alcoholic amblyopia in a young man nineteen years of age. On Christmas eve of last year he went to a party where some form of an alcoholic beverage was served; he had several drinks, and two days later noticed that the vision in his right eye was less acute than in the left, but he made no mention of the fact until his family physician was treating him for grippe two weeks later, when the doctor questioned him about his eyes as the pupils were unusually dilated.

When first seen by me, about five weeks after he had taken the alcohol, both pupils were widely dilated. They reacted to light and not to accommodation. The cornea, lens and refractive media of both eyes were apparently normal. The ophthalmoscopic examination of the right eye showed a distinct pallor of the temporal segment of the nerve head with a blurring of the edges of the disk. The nasal side of the disk was hyperemic. There was no retinal hemorrhage. The perimetric examination revealed a central scotoma, which was oval in shape, and included the blind spot or optic papilla and the fixation point. On this area there was an absolute loss of color vision for green, red, and blue. Form perception was also lost. His vision was reduced to 8/200.

The left eye was less extensively involved; pupil was widely dilated; it reacted to light, but not to accommodation. The ophthalmoscopic examination gave less pronounced findings. The perimetric examination showed a scotoma, with the loss of color vision to green. Vision O. S., 20/200.

Six months after the onset of the disease the examination of the right eye showed a chalky white color on the temporal segment of the optic nerve head, an indication of optic atrophy. Vision was nil. In the



left eye the disease had been arrested and the optic nerve head showed less involvement. Vision O. S., 20/70.

CASE 2.—Nicotin poisoning in a man, age twenty-three. Shoemaker by trade. Negative family history. Denies ever drinking spirituous beverages, but he used tobacco to excess. He stated that he smoked between forty and fifty cigarettes a day; chewed tobacco at the same time; and all he took for his usual breakfast was a quart of strong black coffee. His chief complaint was dimness of vision. Stated that everything looked as though it were misty. He wanted glasses to overcome this discomfort so he could see to work and read. He also stated that his vision was better at night, and that was when he did most of his work. Vision O. D., 20/70; O. S., 20/100. Pupils reacted to light and accommodation. The eyes were otherwise normal except for a pallor of the optic nerve head on the temporal side. This pallor was horizontal and oval in form and extended from the macula lutea to the blind spot.

He discontinued the use of tobacco and coffee. With the use of sodium phosphate, strychnin, and sweating, his condition improved, and on examination eight weeks later his vision was: O. D., 20/30; O. S., 20/40. The pallor of the disks had entirely disappeared and the patient was in a cheerful mood.

#### COMMENT

Any patient, regardless of age, who complains of dimness of vision should receive an immediate and careful examination to determine its cause and should be treated accordingly. Especially is this necessary for patients whose vocation demands that they be able to differentiate between green and red. Any patient with bilateral diminished visual acuity, for which no other causes are evident, should make one suspicious of some form of toxic amblyopia. Treatment should be started early and continued over a long period of time.

17 North Virginia Street.

### RUPTURE OF UTERUS\*

#### REPORT OF CASES

By W. J. BLEVINS, M. D.  
Woodland

**R**UPTURE of the uterus is a potential complication of every pregnancy. Its occurrence should always be anticipated, for, after the accident, only prompt action can save the life of mother and child.

Available statistics indicate that rupture of the uterus occurs about once in three thousand pregnancies. Since in the hands of the general practitioner, the true condition is often not recognized, it is our opinion that the accident occurs much more frequently. In fact our series shows five cases of rupture in 3061 pregnancies.

Rupture of the uterus may occur from direct violence as, for example, during a forceps delivery, or it may occur spontaneously. In the latter instance the remote cause usually will be found in some condition or procedure which has left a deficiency of the uterine wall. Such a weakened area may result from fibroids, from a previous cesarean operation, or from a cicatrized

area resultant on the manual removal of an adherent placenta. Overstimulation of uterine contracture is a further cause of spontaneous rupture and the unwise use of pituitrin undoubtedly has been responsible for many such accidents.

That the incidence of uterine rupture is certainly less than in the past is easily understood when we consider the vast improvement in the technique of directing labor cases. Cesarean operations are more skillfully done; fibroids are not permitted to go unattended; forceps are used more intelligently; pituitrin is being respected as much for its powers for evil as for the safe assistance that it may occasionally render. Moreover women are becoming educated to the wisdom of hospitalization at the time of accouchement, the result being that postpartum conditions do not invite disaster in future pregnancies as was formerly the case.

#### KINDS OF RUPTURE DURING DELIVERY

Ruptures at the time of delivery are divided by DeLee into two classes: spontaneous and traumatic. He classifies spontaneous ruptures as those which occur as the result of the natural forces of labor as when there is disproportion between the child and the pelvis, when the pelvis is abnormal, when tumors interfere with delivery, or when either the uterine or abdominal wall is weak.

Traumatic ruptures are those which result from violence, or from unskilled and faulty interference with delivery. This accident may result from the unwise use of ergot or pituitrin; from improper application of forceps; from an attempt at version before the cervix is completely dilated; or by reason of unduly prolonged labor after dilatation is complete. In the latter instance the anterior portion of the cervix may be caught between the head and the pubic bone, or the posterior portion may be caught between the head and the sacral prominence, causing necrosis, resulting in the rupture of the injured portion during delivery.

If the attending physician has in mind the danger of rupture, he will be on the alert for it. The symptoms of impending spontaneous rupture in cases of long delayed labor may be recognized by a contraction ring appearing high above the pubes, frequently as high as the umbilicus, the lower uterine segment gradually thinning out so that the fetal parts may be easily felt through the abdominal wall. There is increasing tenderness in the pelvis, especially with each contraction, and it is impossible at times to make a satisfactory examination without an anesthetic. However, the tissues may fail gradually and rupture may occur without premonitory signs.

Following rupture there is usually a cessation of pain, the patient probably saying that something "broke" and gave relief. Contractions cease in a few minutes. The child, if it escapes, or partly escapes into the abdomen, soon dies. It may be felt plainly against the abdominal wall. Soon symptoms of shock (thready, rapid pulse.

\* From the Department of Obstetrics, Woodland Clinic, Woodland.

pallid skin, and weakness) appear. There may be no vaginal bleeding, in fact there is likely to be none unless the cervix is torn.

With traumatic rupture, the picture is different. If it is caused by manual dilatation with the use of forceps, or by version, no untoward symptoms may appear until delivery is completed. Severe hemorrhage may then be the first evidence of trouble, followed by shock. If caused by the use of pituitrin any part of the uterus may rupture and, if the tear is in the body of the uterus, the symptoms will be the same as those following spontaneous rupture.

Pituitrin is a dangerous drug if used without a careful study of the patient. Contraindications to its use are deformity, disproportion between the child and pelvis, a history of an adherent placenta removed with difficulty, or a uterus weakened by many previous labors.

A version should never be attempted until dilatation is complete; the same rule applies to the application of forceps. Where there has been a cesarean operation in the past for other reasons than a deformed pelvis or other structural abnormality, a trial labor may be given, watching carefully for delay in dilatation or faulty position of the child. (This should be done by means of rectal examination. With the first sign of delayed labor, a cesarean section should be considered.

If this accident occurs in practice out of a hospital, treatment depends entirely upon the facilities at hand. There is always great danger to both mother and child. The vagina should be packed as rapidly and as carefully as possible and the patient taken to a hospital at once. We think it is not best to insert the packing tightly into the uterus for the reason that the wound may be kept open, with increased bleeding, as the uterus contracts over the packing.

After the patient has been placed in the hospital, or if the accident occurs there, treatment depends on the site of the rupture. If the laceration is above the vagina, an abdominal operation should be done at once. A hysterectomy is usually best. If the wound is in the body of the uterus it is generally safe to leave the cervix, but if the tear extends into the cervix a complete removal of the organ should be done. If only the cervix is lacerated and the injured tissue can be reached from the vagina, the cervix may be repaired at once, and bleeding will stop as soon as the uterus is contracted.

If the vaginal portion of the uterus is necrosed from pressure in delayed labor, the injured tissue may be severed and sutures sufficient to control the hemorrhage may be put in. If much blood has been lost, the patient should have a transfusion before, during, or after any of these procedures.

#### REPORT OF CASES

We are reporting five cases showing a different injury in each, with treatment and results:

CASE 1.—Mrs. M. H., age thirty-two, first seen July 20, 1924, 12 noon. Two previous pregnancies: First child stillborn by reason of malposition. Second

child delivered by cesarean section on account of shoulder presentation. Present pregnancy of about eight months duration. During the night experienced severe pain followed by symptoms of shock. She was brought to the hospital at once.

Examination showed no fetal movement nor fetal heart sounds: fetal parts not outlined. No uterine contractions. Urinalysis showed albumin, but no casts. The blood count showed secondary anemia (hemoglobin 48 per cent), low white count, and relatively high neutrophil count. Temperature normal.

Operation at 2 p. m.: Midline incision. The fundus of the uterus was found adherent to the abdominal wall about the umbilicus. The uterus was edematous; there was a large hematoma in the muscular wall. The uterus was ruptured posteriorly at the level of the internal os, and was filled by old blood-clots. The fetus was dead. A subtotal hysterectomy was done.

The reaction from operation was very unsatisfactory for the first twelve hours. Following that period of time, progress was good except for some pleurisy. The patient was dismissed on August 18, 1924, in entirely satisfactory condition.

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CASE 2.—Mrs. F. S., age twenty-four, first seen May 20, 1925, 9:30 a. m. Two previous pregnancies: First (six years before entry) in labor several days and finally had cesarean section; dead fetus. Second pregnancy: normal delivery, somewhat prolonged. Present pregnancy apparently normal.

At 3 a. m. on the day of entry, patient arose to void and was seized with violent pain in the abdomen. She was seen by a physician at 5:30 a. m. in extreme pain and shock; pulse, 120; temperature not taken. She arrived at the hospital at 9:30 a. m. Examination showed no signs of labor; the fetal parts were felt plainly through the abdominal wall. There were no fetal heart tones. There was considerable abdominal tenderness and marked hemorrhage. The urinalysis was essentially negative. The blood count showed marked secondary anemia (hemoglobin, 32 per cent) and a high white and neutrophil count.

Operation at 11 a. m. A dead fetus, the placenta and many large old blood-clots were found in the abdominal cavity. The uterus was ruptured along the scar of the former cesarean section. Hysterectomy was done and a transfusion of blood given.

The immediate postoperative reaction was good, but on the sixth postoperative day her temperature was 103, and she had a severe chill. A blood culture showed *B. coli*, for which mercurochrome was given intravenously. The patient was fever free on the seventeenth postoperative day, with normal progress thereafter. She was dismissed on June 11, 1925, in good condition.

/ / /

CASE 3.—Mrs. M. D., age thirty-eight, first seen December 25, 1927, 7 a. m. Catamenia entirely negative. Eleven previous pregnancies, all normal with normal deliveries. This pregnancy, at term, normal, except that fetus seemed to be more in midline and high in the abdomen. Labor, began six hours before entry into the hospital. After labor had continued for four or five hours with little progress, a hypodermic (presumably pituitrin) was given to increase the pains, which became severe and rapid, but ceased suddenly. A large lump was noted in the right side of the abdomen. The physician in charge then advised hospitalization.

Examination showed the abdomen to be very large and the abdominal muscles very tense. No fetal heart sounds could be heard. Urinalysis showed some albumin and some red blood cells. The blood count showed a high white and neutrophil count.

Operation was done at 8:30 a. m. on the day of entry. Much free fluid was found in the abdomen. A dead fetus and the placenta were found in the abdominal cavity. The uterus was split from the middle



portion out through the broad ligament to the lateral abdominal wall. A total hysterectomy, bilateral oöphorectomy and salpingectomy were done, and a transfusion of 500 cubic centimeters of blood given.

The postoperative reaction and progress were very satisfactory and the patient was discharged January 12, 1928.

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CASE 4.—Mrs. F. N., age thirty-two, entered the hospital June 28, 1929. Catamenia normal. Two previous pregnancies, the first normal; the second was terminated by abortion at two months. This pregnancy was normal until May 25, when considerable "water" passed. On June 8 there was a large gush of "water," but no pains. The position of the fetus was normal at that time.

Labor began on the afternoon of June 27, 1928, at 6:30 p. m., with hard pains every three minutes. On the following morning the pains came on at one to two-minute intervals, but were not sustained. At 3 a. m. the patient was given one-half cubic centimeter of pituitrin by hypodermic, but there was no progress. At 4 a. m. a forceps delivery was attempted. It was unsuccessful and the patient was sent to the hospital by ambulance.

A Dutryden's band was discovered as well as the fact that the child's head was very large. Version was attempted, but was unsuccessful. The uterus ruptured and cesarean section was decided upon.

Operation at 8 a. m.: Extraperitoneal approach. A dead fetus was obtained, the head very large (hydrocephalus). The usual closure of the uterus was made and the cervical tears repaired.

The postoperative reaction was good. There was some thrombophlebitis of the left leg and infection of the wound, both of which improved rapidly. The patient was dismissed on July 19, 1928, in good condition. She made an excellent recovery.

✓ ✓ ✓

CASE 5.—Mrs. E. S., age thirty-eight, para 10, entered the hospital on June 9, 1929. Nine previous pregnancies with natural births. First labor normal in time and natural birth. There were bilateral lacerations of the uterus during the second labor and the patient had a rather severe hemorrhage. All the other labors were easy. In all but the first, the patient was usually in labor two or three hours with contractions, but no pain nor expulsive force until dilatation was completed. There was usually a rapid labor after expulsive contractions started.

In this confinement the patient was admitted to the hospital at 9 a. m., after having driven a heavy car forty miles after labor began. She continued to have regular contractions, but no pain for three hours. The cervix was completely effaced, but head had not engaged.

One-half cubic centimeter of pituitrin was given to start expulsive pains, without effect. Forty-five minutes later a second one-half cubic centimeter of pituitrin was administered. Within ten minutes expulsive pains began and a living child was born in a few minutes, four hours after entry. The old laceration of the left was reopened, extending into the body of the uterus.

As soon as the child was expelled the patient began to bleed freely and was soon in a condition of shock. The cervix was immediately grasped with the hand in the vagina, and pressure was applied over the fundus. Gas was administered and the rupture repaired through vagina with chromic catgut. The uterus was packed lightly and the old laceration on the right was brought together over the packing. Four grains of caffein sodium benzoate were given. A transfusion of 500 cubic centimeters of blood was given as soon as possible. The patient rallied immediately and the packing was removed after twenty-four

hours. At no time had the patient an elevation of temperature.

Seventeen days after delivery she had a sudden severe hemorrhage. After the usual procedures this improved and the following day a transfusion of 500 cubic centimeters of citrated blood was given. Two days later the packing was removed from the vagina. This was done under anesthesia as there was a possibility of a sudden, alarming hemorrhage that might require surgical procedure. As she continued very anemic another transfusion was given on July 13, following which her condition continued to be very good. However, on July 22 there was a severe hemorrhage with loss of a great amount of blood causing the collapse of the patient. Transfusion was immediately resorted to, and the next day a complete abdominal hysterectomy and salpingectomy were done. It was found that the laceration had extended far into the left broad ligament with an area of considerable infection. This was carefully sterilized with iodine and sutured carefully. Considerable difficulty was encountered at this point from hemorrhage.

The pathologist's report read: "Uterus, 150 grams. Retained seminecrotic placental tissue. Marked chronic cervicitis with erosion."

Her subsequent progress was very satisfactory, showing gradual but very sure improvement, and she was dismissed from the hospital August 24, 1929, in good condition.

Although this patient had had previous rapid labors, the contractions had not reopened the old lacerations. This accident was probably the result of the use of pituitrin which started contractions of the entire uterus, causing expulsion before the head had time to mold.

#### SUMMARY

Case 1: Spontaneous, but not in line of scar made by previous cesarean section. This rupture was in the posterior surface of a uterus weakened by previous malpositions.

Case 2: Spontaneous. In the line of the scar of a previous cesarean section.

Case 3: Traumatic. Caused by the weakened walls of a uterus that had been stretched to its utmost eleven times before, with the sudden strong contractions excited by the administration of pituitrin.

Case 4: Traumatic. Caused by the use of pituitrin, which brought on sudden violent contractions of a uterus that had borne nine previous pregnancies. A head not properly molded was forced too rapidly through this previously weakened cervix.

#### CONCLUSIONS

All patients who have had previous cesarean operations should be warned of the danger of rupture of the uterus in subsequent labors, and if given a trial labor should not be permitted to have severe contractions during the early stage.

Version or the use of forceps should never be attempted until the cervix is completely dilated and the patient is entirely relaxed with an anesthetic.

Pituitrin is a dangerous drug when used to hasten labor, no matter what the indications for its use may be. If administered, it should be given in very small doses (one to three minims) at proper intervals to sustain contractions. Some consider intranasal application to be the safest method.

Woodland Clinic.

## PHENOBARBITAL—RASH AND OTHER TOXIC EFFECTS

### REPORT OF CASES

By SUREN H. BABINGTON, M. D.  
Berkeley

PHENOBARBITAL (luminal) is a valuable sedative and hypnotic. It has come to be a widely used medicine. The average daily dose runs between one-half to one and one-half grains. In state hospitals for the insane, one occasionally sees it being administered in doses as large as ten grains daily to patients suffering from epilepsy. Apparently epileptic patients have a higher resistance, or they gradually develop a certain degree of tolerance to the drug, so that large doses can be given them without ill effects.

*Ill Effects.*—Sometimes even small doses of phenobarbital produce some ill effects that are worthy of consideration. Some of these are: drowsiness, headache, nausea, and a rash resembling that of measles or scarlet fever. In some cases even fever has been reported. Nevertheless, all of these symptoms usually clear up upon discontinuance of the use of the drug, and without injury to the patient.

*Rash.*—Jackson<sup>1</sup> reported six cases of skin eruption out of five hundred patients who took luminal.

Later, Bollinger<sup>2</sup> reported two cases out of two hundred patients.

Still later, Menninger<sup>3</sup> reported three cases out of four hundred patients. In going over the literature, he found that, since the introduction of the drug in 1912, there were only forty-one case reports, including his own three, mentioning skin eruption resulting from the use of phenobarbital. The frequency of the rash lies between one and three per cent of all cases reported upon.

In my series of approximately one hundred and fifty patients who have received luminal in the hospital and in private practice, three developed skin rash with other symptoms, thus raising the number above reported to forty-four.

The fourth case, which is reported below, is given because of the smallness of the dose administered, in order to avoid ill effects of any kind.

### REPORT OF CASES

CASE 1.—A man, fifty-two years old, received sodium luminal, grain one-fourth b. i. d., for two days for restlessness. On the second day he began complaining of generalized itching. At the end of the day he showed a macular eruption all over the body. The drug was discontinued. After three days the medicine was given again for two days. The itching and macular rash reappeared. Upon discontinuance of the drug, all was well. Several days later the skin began shedding like a very fine dandruff. Some physicians may contend that the rash is due to failure to use an alkali with the luminal. However, in this case the patient received sodium luminal, which is an alkaline preparation.

CASE 2.—A woman, age twenty-four, was given luminal, grain one-fourth b. i. d., for nervousness. On the fifth day she called up complaining of frontal headache, "a kind of headache she never had before in her life." It felt "hard and heavy in the head."

The drug was discontinued: the headache stopped. However, a week later she developed a measles-like rash over the neck, gradually extending to the trunk; none on the extremities or face. The rash persisted for several days with considerable itching, which had to be controlled by internal and external medication. A month later, luminal was administered again on the assumption that perhaps the symptoms had been due to something else. After three days all of the above symptoms returned. The rash and itching then persisted for nearly a month. The patient was not given any more luminal, and she has as yet never had a recurrence of the above described headache nor of the rash since that time. I did not like to make the experiment with her for the third time.

CASE 3.—A woman, sixty-one years old, was given luminal, grain one-fourth b. i. d., for insomnia and nervousness. On the second day she developed a scarlet-fever-like rash all over the body (including the extremities and face, unlike Case 2), accompanied by a marked itching which required medication for relief. The luminal was discontinued for three days and the itching and rash disappeared, except in the interdigital spaces on the hands, where there was some swelling and redness present, due, apparently, to scratching and rubbing. Three days later the luminal was resumed. In a day, rash and pruritus returned and were as severe as before. Upon discontinuance of the luminal, the rash disappeared and the itching ceased.

CASE 4.—A woman, age sixty-five, weight one hundred and fifty pounds, after taking one-fourth grain of luminal b. i. d. for two days for insomnia, complained that she "could not raise her arms," and she felt "very light in the feet." She could not keep her eyes open. She had no skin eruption or reaction. The dosage was cut down to one-eighth grain by breaking into two pieces the smallest tablet manufactured (which is one-fourth grain). The by-effects disappeared, and this small dose produced the desired results.

### COMMENT

Many theories have been advanced to explain the cause of the rash, such as idiosyncrasy, poisoning, and calcium deficiency. Some contend that the rash is due to failure to use some alkali with luminal. However, our first case received sodium luminal, which is an alkaline preparation.

2301 Ward Street.

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Prevention of the Introduction of Diseases From Abroad.—A report which shows the activities of the United States Public Health Service in preventing the introduction of diseases from abroad was recently forwarded to Congress by Surgeon-General H. S. Cumming. This report indicates that no instance of the importation of any quarantinable disease occurred during the past fiscal year. No cases of plague, cholera, yellow fever, or typhus fever arrived at quarantine stations in the United States. There were, however, ten instances during the year of bubonic plague occurring on vessels arriving at ports in foreign countries. The preventive measures applied by officers of the Public Health Service at foreign ports of departure are reflected in the small number of quarantinable diseases on vessels arriving at ports of the United States.—*United States Health Service*, December 24, 1929.



# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

## THE LUMP IN THE BREAST

ALSON KILGORE, SAN FRANCISCO.—In our courts the accused is innocent until proved guilty, but in the breast a lump is cancer until proved benign. The surgeon who advises watchful waiting in the presence of a single definite breast lump in a woman over twenty-five will find too often that he has been watching an early cancer become incurable. Every such lump should be explored. In the examination of a breast (without skin retraction or other classical signs of cancer) decision should be limited to the question of whether an actual lump is present or whether the mass felt by the patient is only a "lumpy" area of breast tissue—a decision that, in itself, often requires no mean skill and experience. And the surgeon should never lose sight of the fact that extended or vigorous examination may cause rapid metastasis of an early cancer. One or two gentle touches must furnish all the information needed. Leaving a breast sore from clinical examination is absolutely inexcusable.

It is today settled and no longer debatable that exploration of a breast lump is justifiable, but it is equally undebatable that if cancer is found, the complete operation must be done at the same time. Frozen section diagnosis should always be available. Occasionally only a microscopic section will settle the diagnosis. But the average hurried frozen section is less trustworthy than paraffin or celloidin sections, and the competent surgeon will depend upon a reasonably clear gross diagnosis rather than on frozen section if the two disagree. The really competent breast surgeon must be at least a good amateur pathologist. It is not too much to ask that he be confident of his recognition of certain typical pictures—of normal breast tissue, of cancer, of the encapsulated lump, of the simple and the papillomatous cyst, and of the nonencapsulated cystadenoma.

But our responsibility is not ended when we have learned to deal properly with breast lumps. We cannot treat early cancers unless our patients bring them early. It has been proved possible to educate communities about breast lumps. There is still room for improvement in popular knowledge in California. Physicians must educate their patients to bring breast lumps for examination the moment of discovery. As a matter of fact, we can well go farther than that. Over 90 per cent of breast cancers are discovered accidentally—unintentional contact of the hand on the breast in bathing or dressing. The accidentally discovered lump has often been present and discoverable for months before it is found. Lumps should be sought for by every woman routinely, not discovered accidentally. If we teach our patients to keep track of themselves as a matter of

habit, passing a soaped hand flat over the breasts at frequent intervals, we will see many more curable cancers. And the sensible woman, taught that a lump is the one important danger sign, will not develop a morbid phobia so long as she continues to find her breasts free of lumps.

\* \* \*

EDWIN I. BARTLETT, SAN FRANCISCO.—The old adage, "When in doubt do a complete breast operation," still holds today. At one time it meant the removal of a lot of innocent breasts because we depended entirely upon the clinical diagnosis. Today there need never be any doubt and, therefore, no innocent breasts need be sacrificed. This comes about through the perfection of the exploratory operation and the diagnosis at the operating table by the gross appearance of the tumor or by the frozen section. All cases can be positively diagnosed and properly treated while the patient is still under the primary anesthetic.

The old saying, "Amputation of the breast is not enough for cancer, and too much for anything else," still holds today. Simple amputation is seldom indicated, therefore a woman may have practically a guaranty that she will not lose her breast unless cancer is found. She can be further assured that the gland will be restored completely or nearly to its normal shape, that the function will not be seriously interfered with, that she need have no fears regarding serious discomfort or distress with lactation, and that the skin over the breast will show only a fine white line. To accomplish all this the surgeon makes an incision radiating from the nipple, he dissects the tumor very carefully away from the surface of the gland or simply strips the lining of a cyst. If it becomes necessary to remove a portion of a gland, he takes a wedge-shaped piece with the base of the wedge at the periphery of the breast, and the blade of the wedge toward the nipple. He closes the defect by accurately approximating the posterior cut edges of the gland. He thus avoids lactation trouble by leaving behind no secreting breast tissue which does not have free drainage to the nipple, and he leaves no furrows or depressions in the surface of the breast gland.

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M. T. BURROWS, PASADENA.—While most cancers of the breast make themselves known by the development of a lump, there are a few which fail to give this signal. The cancers which are most frequently missed are those arising from the ducts deep in the breast and the more diffuse cancers which have an acute onset. The first of the latter types are easily diagnosed by the appearance of an eczematous rash about the nipple. A suddenly developing acutely swollen, red and tense breast, especially coming on without warn-

ing, should be considered cancerous until proved otherwise.

While the easiest method of treatment of any breast tumor is exploration and removal it must be remembered that the removal of the breast of a young woman, or even cutting into it, means either robbing this woman of one of the charms of her womanhood or doing injury to the ducts which will be a constant source of trouble to her throughout her sexual life.

Where it is possible to make a definite diagnosis of cancer the breast must be removed. Whether one should advise the immediate removal of every tumor of the breast is a question to be solved. While a few breast cancers make themselves known by the appearance of a rash about the nipple, most cancers of the breast begin in a mastitis of shorter or longer duration or other tumors. Since our recent work on the relation of cancer to vitamin deficiency, we have assumed quite a different attitude toward many of these precancerous lesions. The breast of one woman with an eczematous rash just appearing about the nipple healed completely with the removal of several abscessed teeth and the use of a healthful diet. Cancers were found at operation deep in the breast of two other patients. In one the eczema had existed for six months; in the other, two years.

One sees a tumor often in the breasts of young and middle-aged women who may or may not have borne children. Many of these cases have been associated with a cervicitis, abscessed teeth, and secondary anemias. The breasts of these patients which showed no definite signs of malignancy have not been touched. The associated lesions, on the other hand, have been treated at once. The abscessed teeth have been removed, cervicitis treated, and an attempt has been made to clear the anemia. It is surprising how many breast lesions have disappeared under this treatment. Our method is to institute the treatment of these associated lesions at once. If the breast lesion does not recede or disappear within two to four weeks, operation is then advised. Of the twenty-one cases of this type seen during the last one and a half years, seven have been operated upon and six found malignant.

Besides these types of lesion one sees tumors in the breasts of many of the thyroid cases and other cases where there has been a disturbance in the sex organs. What is to be done with many of these cases is a question yet to be solved. While a few of these patients have come to the office with infections in the breast, a heightened leukocyte count and a low afternoon fever, others have shown no such symptoms. The former group have been operated; the latter have been placed on the waiting list and their general health improved as much as possible, especially if they are young girls the removal of whose breast would be a distinct handicap to their future happiness.

Most of the other benign tumors of the breast have been removed because of disfigurement or lack of positive means of diagnosis.

Many authors advise the removal of all lumps from the breast. Many such lumps appear in

young girls before marriage. Many of these are connective tissue overgrowths, the immediate removal of which is uncalled for because most of them respond readily to the treating of focal infections, good food, marriage and children. While it is true they may reappear, as old mastitis of nursing may reappear in later years, it is probably better to wait and treat them at this later period.

Cancer is not a local disease. Our recent studies have indicated that it depends not only upon a certain type of local degeneration, but also upon a drop in the general nutrition or health of the patient. When we have appreciated this fact and have looked upon our cancer patients as patients whose general health must be restored first, then many more cures will be the result. Cancer is not a disease to be treated by any one particular method. There is no such method. Each cancer must be removed completely or otherwise destroyed by the simplest method available. Each case is a problem by itself. It is a disease which must be treated by men skilled both in pathology and general clinical methods. Cancer deals with the most fundamental problems of life. It is an overgrowth of cells. It is not a true disease. It is a reaction which may take place in any area suffering degeneration when there is a drop in the general nutrition of the organism. Its treatment demands not only its removal, but the restoration of the patient to his former state of health.

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Treatment of Diabetic Coma.—At the Peter Bent Brigham Hospital, nurses and house officers have received the following instructions for the management of diabetic coma:

1. As soon as the patient arrives place him in a warm bed.
2. Give an enema and obtain a blood and urine sample.
3. Give 1000 c.c. of saline subpectorally at once.
4. Give 25 units of insulin at once.
5. Give insulin about every two hours thereafter until the urine becomes sugar-free, judging the dose by the amount of sugar present in catheter urine specimens. When the urine becomes sugar-free continue to examine it at  $\frac{3}{4}$ -hour intervals using enough insulin to prevent the return of glycosuria and acidosis.
6. Let the patient have about 4000 c.c. of fluid each 24 hours during the first few days in the form of subpectoral injections, rectal taps or fluids by mouth. The rectal tap should consist of 5 per cent glucose in saline or tap water. Do not use sodium bicarbonate.
7. As soon as the patient becomes cooperative, let him have small amounts of warm fluids to drink, and, by way of food, as much orange juice, ginger ale, or oatmeal gruel as he likes.
8. As soon as the patient's condition warrants it, allow him to eat a low calorie "soft" diet including milk, cream, butter, crackers, eggs, and cereals.
9. Comatose patients whose acidosis does not improve, as measured by the plasma bicarbonate, within eight hours after insulin is first given, should receive 25 gm. of sodium bicarbonate by mouth, rectum or vein during the course of a few hours. This dose should be repeated in twelve hours if acidosis persists.
10. Diabetic patients admitted to the medical wards with any complication of a possible surgical nature (carbuncle, gangrene, lymphangitis) should be seen by the Surgical Resident at once. A diabetic patient can be prepared for operation in a few hours by the proper use of insulin.
11. Hypoglycemic reactions are to be treated with the oral or rectal administration of 10-20 gm. of sugar. Intravenous injections of sugar are rarely needed.—*Journal of the Medical Society of New Jersey.*



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Editors . . . . . { GEORGE H. KRESS  
EMMA W. POPE

Associate Editor for Nevada . . . HORACE J. BROWN

Associate Editor for Utah . . . . . J. U. GIESY

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**Leaflet Regarding Rules of Publication.**—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

any hospital which has up to this time been constructed, anywhere in the entire world. CALIFORNIA AND WESTERN MEDICINE in proper time will present to its readers a description of this new building, with comments on its arrangements and facilities, and on its relationships to the community and to the medical profession.

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*Why These Criticisms by the Council of the California Medical Association Are Made.*—At this time, comment will be made on the announcements which recently have been put forth by the hospital authorities, or means to meet its present overcrowded condition. Criticism is not here expressed on the effort of the hospital authorities in striving to provide care for the indigent sick and injured, since that is their obligation as officials; but rather because provision has not been made before now to meet this need which for a long time has been so evident, through the erection, say of a battery of simple one-story, easily constructed, practically fireproof temporary structures, by means of which at very moderate expense the rich county of Los Angeles could easily have provided one to two hundred additional beds.

Such temporary structures could have been built either on the present hospital site acreage or at the county farm. If at the latter place, then the beds of these emergency structures could have been filled by some of the less ill or chronic inmates of the county hospital, and placed under the care of salaried residents and of interns at the infirmary division of the county farm. Such buildings later on could have been utilized for other purposes.

The opinions here expressed, probably would not have been made were it not for the fact that the plan which has been devised to meet the Los Angeles County Hospital's needs, presumably by its medical director, are of such nature as to be a possible menace to the future welfare of the medical profession and the standards to which it is committed. Since the California Medical Association is much interested in the maintenance of such standards, it cannot be expected to stand by without pointing out what seem to be serious mistakes in procedure.

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*The Plan as Outlined in Bulletin of January 11, 1930.*—In the opinion of the members of the Council of the California Medical Association, this new Los Angeles County Hospital plan, even though intended only as an emergency measure, is fraught with danger to the maintenance of the best standards in public health and in organized medicine, and since it could have been avoided, to that extent at least, would seem to have been unnecessary.

The procedure to be followed in this innovation is outlined in Los Angeles County Hospital Bulletin No. 1072 of date of January 11, 1930. This bulletin is addressed "To Coöperating Pri-

# EDITORIALS

DOES LOS ANGELES COUNTY HOSPITAL  
EXTENSION INTO PRIVATE HOSPI-  
TALS CONSTITUTE A MENACE  
TO MEDICAL PRACTICE?

*Los Angeles County Hospital Overcrowded: Ten Million Dollar Building Being Erected.*—The Los Angeles County General Hospital is going through the strain of somewhat severe overcrowding. For a number of years the annual reports have stressed its need for more beds. In response to the agitation for facilities adequate to care for the indigent sick and injured of Los Angeles County who seek admission to its wards, a new hospital unit is being erected. This new unit for injuries and for acute diseases will cost some \$10,000,000! Perhaps \$12,000,000 will be nearer the total cost of this new unit. Part of this immense sum of money has come out of an initial \$5,000,000 bond issue. The remainder is being taken from the annual tax levy funds of the county, because the taxpayers have acquired a partial prejudice toward bond issues, and general taxation brings in the money with less general strain on the body politic. This new unit probably will not be ready for occupancy for another year or so.

The new structure is a massive building that is unique in many ways and quite different from

vate Hospitals in Los Angeles County Accepting County Hospital Patients and also to their Medical Staffs" and contains some twelve items of information and instructions, covering three pages. Among other things, it is stated therein that the Los Angeles County Hospital itself charges inpatients, who are not indigent, that is, who are not in the pauper classification of the California Code, the sum of \$3.50 per day, and that the outpatients, namely, the ambulatory or dispensary patients, are charged 50 cents per patient visit.

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*An Example of Hypersensitivity.*—Item 11 of the bulletin restates these charges, and at the same time practically informs members of private hospital staffs who may be called upon to care for such county hospital patients, to exercise caution and not to mention the words "indigent," "county charge," or "pauper." Perhaps it will be just as well to quote this item exactly as it reads:

"11. While, as stated in the attached mimeographed report, all county hospital patients are classed as indigents, even though a few of them pay the county as much as \$3.50 per day for in-patient care and fifty cents per out-patient visit, the greatest care is taken that no hospital employee or attaché ever refers to them and in their presence using such words as "indigent," "pauper," "county charge," etc., as many times our patients are extremely sensitive on this point."

The above delicacy of feeling for these indigent patients is of interest when one remembers that the Los Angeles General Hospital, which according to state law can only care for indigent patients, has a varying capacity of 1564 to 1659 beds, and that some 29,410 inpatients were admitted thereto in the fiscal year ending June 30, 1929; that some 223,475 outpatient or dispensary visits were recorded for the same time period; that the professional services rendered by some 150 to 200 members of the Los Angeles County Medical Association, when estimated on the extremely nominal basis of \$1 per hour for time spent in the institution (little more than a day laborer's wage), and of \$10 for the major operations performed by these physicians and surgeons, approximates the huge sum of something like \$500,000 yearly, which these physicians and surgeons gratuitously give to these patients and the county with little or no recognition from the general public of Los Angeles for this superlatively generous donation on the part of the medical profession; that in addition to the above, the private hospitals and the staffs of such institutions are now called upon to make further and additional donations to the county; and last but not least, that while the members of the medical profession are expected to do their stupendous work in this and similar institutions, almost unhonored and unsung, they at the same time must not divulge to the indigent or pauper patients that they as physicians and surgeons are donating their services to these county charges, and above all else not make mention of the words

"indigent," "pauper" or "county charge" in the hearing of such patients.

The writer has been on the staff of this institution and a member of its executive medical board for almost twenty-five consecutive years. In all that time he can remember no single time when complaint was made of attending staff members speaking of patients in their presence, as paupers or indigents. It would seem logical to assume that a group of physicians and surgeons who are willing to donate the great amount of professional services already indicated, would also observe the proprieties, and be sensitive to the unfortunate condition of the indigent patients, and not attempt, through unnecessary or cold remarks to humiliate such county charges. And as a matter of fact they have not done so in the past nor are such physicians and surgeons apt to do so in the present or future.

It certainly seems that this cold-blooded acceptance by a rich county and people, of massive and generous professional service of the character just mentioned, when coupled with what might be called this official supersensitivity on behalf of these indigent fellow citizens, is just a wee bit incongruous.

And especially so, since the last annual report of the institution itself states, "what constitutes a pauper or poor indigent person entitled to county aid." The same annual reports, however, have not been brought out in printed form nor are the vast monetary equivalents of the services rendered by the members of the attending staff of the institution, indicated therein in forms of nominal or real monetary values. Some day physicians and surgeons will rebel against such callous treatment and nonappreciation of gratuitous professional services, and insist that their donations be listed in dollar and cents evaluations, as are those of lay citizens.

It is of interest to note, also, that when the county of Los Angeles sues relatives of persons who have been inpatients, in order to collect the \$3.50 per day which it charges and attempts to collect when possible from any whom it believes are not indigent, that it does so on the legal ground that such inpatients were not entitled to free care, because of evidence that such patients were in fact, not "paupers." In other words, the county and hospital can cold-bloodedly use the words "indigent, county charges and paupers" to serve its material interests, but the doctors giving the gratuitous service to the rich county and to the indigent sick and injured are cautioned that they must not do so, even though there is no record of their having done so during many years of service.

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*Industrial Accident Fee Table Is Dragged In to Hold Down Possible, "If Any," Fees.*—In a pink sheet enclosure to Bulletin 1072, to which is also attached a blue "Fee Schedule—Approved by the Industrial Accident Commission," and a



copy of the Los Angeles County Hospital "Report for the Fiscal Year Ending June 30, 1929," it is stated that for the care of county hospital indigent patients in private hospitals, it is

"understood that the (private) hospital charges for such patients will not exceed \$4.50 per day for general ward care and nursing service and that if payment of physicians' services becomes necessary that their charges will be at rates similar to those established by the fee schedule for physicians and surgeons caring for patients under the Workmen's Compensation Insurance and Safety Act approved by the Industrial Accident Commission. (Form No. 97.)"

2. "Please submit to me on the 1st, 10th and 20th of each month, duplicate bills for the hospital care of, and also duplicate bills, if any, for all physicians' services to this patient; each such bill to include the dates and amounts of all former unpaid bills and to state briefly but accurately the present diagnosis of the patient at the time the bill is rendered and also the probable length of time the patient will need to remain in the hospital thereafter."

\* \* \*

*Allowance for Private Hospitals Below County Hospital Per Capita Cost!*—One other quotation, and this, from the annual report:

"During the present year its per capita cost per day for in-patients was \$5.272 and per out-patient visit, \$1.235."

In other words, the rich county of Los Angeles, with no overhead charges such as taxes, and with gratuitous services from about two hundred physicians and surgeons who at the ridiculously low estimate previously mentioned, give services of a monetary value of \$500,000 yearly, finds its own per capita cost per day for a bed or inpatient to be five dollars and twenty-seven cents (\$5.27), but asks private hospitals to accept such patients at four dollars and a half (\$4.50) per day and seemingly sees no inconsistency in such action. At the same time, it instructs members of the attending staffs of private hospitals: one, to make out their bills for services, in case such staff members do not wish also to donate their services (the language used almost implying that they should so donate), according to the fee schedule listed in the industrial accident fee table,—a fee table which the California Medical Association, at the time of its adoption, never intended should be applied to other than industrial accident cases; and two, not to mention the dreadful words "indigent" or "county charge" in the presence of such county hospital patients.

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*California Medical Association Council Urges Consideration of This Problem.*—The Council of the California Medical Association at its regular meeting on January 18 reviewed the peculiar situation which has arisen in the Los Angeles County Hospital and of which some of the issues are as above outlined. The Council believes that the facts and principles herein mentioned are worthy of careful thought by members of the California Medical Association, and has instructed that the foregoing presentation be printed in the official journal of the Association. Should occasion warrant, the Council later may make further comments relative to these matters.

## DIFFICULTIES MET WITH IN TRYING TO EDUCATE CITIZENS CONCERNING QUACKERY

*Editor American Medical Association Journal Visits California.*—Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, recently visited California, making a goodly number of addresses before different medical, social service and civic organizations. His reception in Southern California was not without reverberations, and to members of the medical profession should be of some interest as showing certain thought trends in modern day newspapers and among some lay citizens.

One of the Los Angeles newspapers, the *Times*, on one day gave a two-column interview in which were presented some of Doctor Fishbein's viewpoints on public health and medical matters, and on some phenomena which can be observed in certain cultist healing art groups. Subsequently it printed other articles which will be referred to in these comments.

\* \* \*

*No Official Spokesman in Medicine.*—Doctor Fishbein in all his lectures and interviews was speaking for himself, and not for the American Medical Association or for the California Medical Association. Dr. Fishbein was careful to bring out this point, because it is well known that our county, state and national medical associations do not provide in their organizations for official mouthpieces or publication committees.

Or to put it otherwise, every physician who practices non-sectarian medicine has not only the right to give expression to his own individual viewpoints concerning disease—as he interprets disease through scientific facts well established—but has also equal right to express his personal opinions on matters of medical organization, procedure and policy. It is true that men often speak presumably with some authority and with a great deal of support from the profession, but that is not because of the speakers themselves or of any official positions which they hold, but rather because of the soundness of the facts and doctrines which they expound. In such sense, perhaps, the viewpoints of Dr. Fishbein may carry more than ordinary weight.

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*Doctor Fishbein's Pasadena Experience.*—Subsequent to several Los Angeles addresses, Doctor Fishbein went to Pasadena, where he delivered a talk on "Healing Fads and Quackery" as one of the speakers in a regular lecture course at the Pasadena Community Play House. At this lecture Doctor Fishbein must have thought he was on a strenuous political campaign, because his audience contained a goodly number of individuals who took considerable pleasure in heckling him. So much was this the case that Doctor Fishbein felt called upon to tell his audience that he was there to discuss his subject from the standpoint of his own knowledge of the sub-

ject and of his own conclusions, and that he intended to do so; and further, that if his viewpoints were obnoxious to any of his hearers, such persons were invited to leave the hall. In other words, if his hearers desired to hear his opinions they were welcome to stay and then form their own conclusions thereon. Otherwise their room was preferable to their presence.

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*A Newspaper Editorial on "Medical Intolerance."*—What was presumably a follow-up of this Pasadena lecture is to be found in an editorial captioned "Medical Intolerance," which appeared a couple of days later in the Los Angeles *Times*. The style marks of the said editorial would tempt one to be almost suspicious that it had been kindly placed in the hands of the editor of that newspaper by one or more sympathizers with the Pasadena hecklers.

As might be expected from its caption, there was a general effort in this particular editorial to play up broad-mindedness and similar virtues, going on from that to emphasize that the editor of the *Journal of the American Medical Association* should be above "bigotry, narrow-mindedness and bygone prejudice." The editorial even went so far as to state that it was,

"to be regretted that Dr. Morris Fishbein, editor of the *Journal of the American Medical Association* should attempt to hog-tie the medical profession in the straitjacket of intolerant conformity to dogmatic theories from which the helpers and healers of humanity at large have of late been so successful in freeing themselves."

The editorial called upon the American Medical Association to "clear itself of the charges of arrogant intolerance," and stated further, that "his slur on Los Angeles as a paradise for medical quacks is a boomerang that hits hardest the very profession Doctor Fishbein has elected himself to defend." There was also a very gentle but nevertheless pronounced defense of the "simple form of healing through faith, employed by Christ himself."

A particularly naive paragraph in the editorial in which the writer or writers showed a pathetic lack of knowledge of the educational and professional training requirements which should be demanded of every practitioner of the healing art, no matter of what supposed school, is to be found in the following:

"If there are fifty cults in this community formed to fight disease, outside the orthodox medical pale, as Doctor Fishbein alleges, it is but another sign of the immensity of this field of research and how much territory remains to be covered. Should some explorer discover that many ailments, now allocated to the pharmacopeia and the operating table, could be as effectively cured by attention to diet and hygiene, he would decidedly deserve well of his fellow beings. Medical diagnosis, under the canons of the regular school, is not such an exact science as to call for sneering reference to the substitution of the violet rays of the sun for the old-time allopathic drug-doping in the treatment of tuberculosis."

A later inconsistency is presented in the last sentence of the editorial. It is well known that without the publicity which through the newspapers is given to cultist and faddist medicine and to quackery, that these excrescences on healing art practice would die a natural death through inanition—or to use the late Mr. Barnum's vernacular, through "lack of suckers." The advertising managers of newspapers are usually well aware of this important fact and govern themselves accordingly.

Therefore it is interesting to note that the last sentence of the *Times* editor emphasized his belief that the good opinion which lay citizens supposedly have of cultist groups, should be an adequate and complete defense for the existence of such cults! The editorial closes as follows:

"No one denies that there are many charlatans and quacks in Los Angeles, as in every other large city, who exploit the sufferings and sickness of humanity for their own personal profit. It is the duty of every good citizen to expose such practices when they come under his notice. In doing so Doctor Fishbein would have been properly within his province. But this is an entirely different proceeding from virulently attacking organizations and systems recognized as beneficial and by large numbers of our best credited and most influential people."

Because the line of thought expressed by the *Times* editor reveals the peculiar psychologic approach which a considerable number of the laity hold on matters having to do with the public health and the healing art, it seems worth the while to call attention to this particular and recent California happening.

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*Viewpoint of Another Lay Editor—Chester Rowell of California.*—Fortunately, all editors do not hold such views, as witness the very sane and excellent discussion of this same *Times* editorial on "Medical Intolerance," as printed in the San Francisco *Chronicle*, and which came into our hands after the above paragraphs were written. In order that the readers of CALIFORNIA AND WESTERN MEDICINE may have the opportunity of reading an able defense by a Californian who is a layman, the "Chester Rowell's Comment" which appeared in the *Chronicle* will be found in this issue, in the "As Others See Us" column of the Miscellany Department. Our readers are advised to read it. Also the illuminating article in the Miscellany Department, which appears under the title "Descartes Was Right," and which is from the pen of Dr. Harry M. Hall, secretary-editor of the West Virginia Medical Association.

Among the special articles of the current issue of this journal is also printed an article by Dr. A. B. Cooke of Los Angeles on the "Cost of Medical Care and Hospitalization." Bearing on the same general subject, is a letter from Dr. J. M. Neil of Oakland, which will be found in the Correspondence column in the Miscellany department of this issue. These articles are all worthy of perusal and thought.



## THE "COST OF MEDICAL CARE"—AS DISCUSSED IN SOME RECENT LAY JOURNALS

*The Unfortunate Slogan, "The Cost of Medical Care," and Its New Adjective Prefix, "High."* Whether or not the publicity which in considerable part has been brought into existence by the establishment of the national Committee on the Cost of Medical Care—a publicity of which, during the last year it might be said, that it had almost transformed itself into a type of propaganda—as yet has reached its peak, is at this time somewhat difficult to say. From recent lay press contributions, it would seem that it had not, for all signs indicate that a vast deal of printed material will come off the press in the form of books, and as articles in periodicals and newspapers, before the medical profession hears the last of this most unfortunate slogan—"The Cost of Medical Care"—a slogan which in popular usage, through the addition of an adjective, now is more often referred to as "The *High* Cost of Medical Care."

Medical men and women who hold to a contrary viewpoint on these matters are referred to recent issues of magazines such as the *Survey-Graphic*, *Collier's*, the *Literary Digest*, and others, in which have appeared a large number of articles dealing with the subject, "The Cost of Medical Care"; a subject which is really of great importance to both the medical profession and the laity, because of recent changes in modes and standards of American living, and which it may be taken for granted, will not down without serious attempts at its solution.

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*A Symposium on the "Cost of Health," in the Survey-Graphic.*—The *Survey-Graphic* of January 1930, Vol. 16, No. 4, is practically a special edition on this subject. The editor of that magazine, however, kindly changed the caption of his symposium from "The Cost of Medical Care" to that of "The Cost of Health," although a cover subhead in red was entitled "Adequate Medical Care for Every Man." The captions almost tell the story. This January number of the *Survey-Graphic* contains some sixteen articles on different phases of the supposedly same subject—"The Cost of Health," and make interesting reading.

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*Three Californians Honored as Contributors to This Symposium.*—From the standpoint of local pride California should feel flattered, because with forty-eight states in the Union and only sixteen contributors to this national magazine, three members of the California Medical Association were enlisted to write articles. Whom to thank for this special selectivity is still a mystery. Nor in one sense is that knowledge necessary, inasmuch as each of the three Californians gave an excellent exposition of his particular topic.

First, Dr. Lovell Langstroth of San Francisco presented an article entitled "Patients Cry

for It," in which topics such as food, exercise, sunshine and other health factors were commented upon, in their relation to the cost of medical care. Second, Dr. Philip King Brown of San Francisco discussed "Industry's Answer" and showed "How a Railroad Safeguards Its Employees in Health and Sickness," as based on experiences of the medical department of the Southern Pacific Railroad. Third, Ray Lyman Wilbur took up "The Task of the Committee on the Cost of Medical Care," of which committee he is chairman, and the investigations and preliminary reports of which committee have seemingly excited the curiosity and interest of more lay than medical publications.

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*Some Viewpoints of Dr. Ray Lyman Wilbur.*—Our esteemed colleague, Doctor Wilbur, President of Stanford University, on leave, and also Secretary of the Interior of the United States, in his article makes a number of statements which should lead many members of the medical profession, especially those who would scoff at all this, to please—"Stop, Look, and Listen."

For instance, Doctor Wilbur puts himself on record as follows:

"Yet the members of the medical profession are tradition-ridden and uneconomic in their thinking. They have grown up under the historical system of the charitable care of the indigent sick." . . . "With the rapid changes going on in every phase of American life, the medical profession is constantly confronted with the fact that it is losing step, working at a disadvantage, and that unless order comes out of the present chaos in some way or in another, abnormal solutions may be developed in some of the forty-eight states which will be of great detriment to the interests of both patients and doctors."

It is not possible to go into detail concerning the sixteen articles, other than to state that they present in somewhat compact form a mass of expression in current thought on these important topics, in which every practicing physician and surgeon might well be so interested that he would wish to obtain a copy for his own perusal.\*

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*Mr. Julius Rosenwald of Sears, Roebuck Helps Spread the News.*—By an interesting coincidence, while the thoughts here presented were being transcribed by the writer, and after he had himself purchased extra copies to send to his fellow councilors of the California Medical Association, there came to him a letter from one of the representatives of the *Survey-Graphic*, which itself is most illuminating, as showing how so prominent an individual as Mr. Julius Rosenwald, head of the Sears-Roebuck Company, looks upon this January issue of the *Survey-Graphic*.

Mr. Julius Rosenwald of Chicago, founder of the Rosenwald Foundation, has been very much

\*For the convenience of readers, who cannot obtain a copy of this issue through their local news dealer, it may be stated that the address of the "Survey-Graphic" is 112 East Nineteenth Street, New York. Single copies, thirty cents.



interested in a number of these matters, and certain of his viewpoints on some of the functions of the medical profession might be stated to be almost as radical as those held by Mr. Henry Ford, of which comment was made in this column in the July 1929 issue of this journal, page 59. Mr. Rosenwald evidently looked upon the recent January issue of the *Survey-Graphic* as an important contribution, for in the letter which came to the writer, it was stated:

"Through the generosity of Mr. Julius Rosenwald the current issue of *Survey-Graphic* is being sent to you and to a number of persons who, we believe, are interested in the cost of medical care. This subject is important to those millions of people who receive medical service, and to the hundreds of thousands who are professionally engaged in rendering it."

"In this number we have tried to assemble the viewpoints of both consumers and producers; the man or woman of moderate means, the physician, the hospital manager, the nurse, the public health administrator and social worker. We have not attempted to present solutions, but facts, impressions, and ideas, which may stimulate thought and constructive discussion."

"Later issues will continue to develop this and related themes." . . . \* \* \*

*The Lesson in All This.*—A lesson can well be taken to heart by members of the medical profession who look askance at a discussion of these medico-economic and sociologic problems—from the fact that Mr. Rosenwald, a layman, saw fit to purchase a large number of this particular issue of the *Survey-Graphic*, and to distribute the same to members of the medical profession and to the laity. If his action means anything, it would indicate that these subjects are being seriously considered by large groups of influential and wealthy laymen. In our country, where "money talks," and where successful men in business so often feel themselves competent to sit in decisive judgment on most matters in which they are interested, that means that certain of such lay fellow citizens in the not remote future, are more than apt to outline in considerable detail and finality just how they think the so-called great white collar brigade of fellow citizens should be medically cared for. And in such analyses, unless humans of today are different than in the past—which they are not—the medical profession may find to its sorrow, that through its own lack of active interest (as our prominent California colleague of the United States Department of the Interior, Doctor Wilbur, has well said), the end results "will be of great detriment to the interests of both patients and doctors."

Wherefore, it seemingly behooves all medical men and women, who would safeguard the interests of medical science and practice, in order that in the future the profession may measure up to its greatest possibilities, and in order that succeeding generations of physicians may be surrounded by conditions favorable to the development of the highest type of medical science and practice, that these important medical and economic problems be thoroughly studied. In this

matter-of-fact age, escape from unpleasant situations does not come through application of the ostrich strategy of burying the head in sand, but through accurate and scientific investigations and search for fundamental facts, the possession of which would make possible logical plans for future lines of action.

There is no reason for fear, but on the other hand, there are a large number of reasons why members of the medical profession should have as much accurate information on these matters as do laymen. With such information and facts, combined with clear thinking, and with that spirit of loyalty to the medical profession which has always been so characteristic of its disciples, the solution of most of these problems should be possible. Let us see to it that the solutions shall come in good part from within, and not entirely from without.

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A Question of Ethics.—One of the especially interesting features of this number will be found in the letter of the Committee on Ethics and Discipline of the Massachusetts Medical Society respecting the association of a physician with an organization very much like the Life Extension Institute.

The committee makes clear the fact that the company advertises for business and quotes the statement of the physician in charge with respect to his interpretation of his functions.

The business of the company apparently is to examine persons and, based on this examination, give such advice as may be indicated for the guidance of the patient in dealing with abnormalities detected or methods of living which are not conducive to health.

The assumption of the medical director that this examination and advice do not constitute the practice of medicine is, we believe, at variance with the broad conception of the functions of the doctor. The idea that the practice of medicine is restricted to the treatment of a demonstrable disease is narrow and even absurd because it is generally believed that preventive medicine has accomplished even more for humanity than the wonderful resources of therapeutics, and the examination of patients for the purpose of correcting defects present or impending must be construed as practicing medicine because only educated physicians are equipped to do this work.

The question of whether the law relating to the practice of medicine controls this type of work may wait for solution by the courts, but the ethics of advertising is of major importance and should engage the thoughtful consideration of those in positions to influence the behavior of the fellows of the society. Intelligent laymen are watching the habits of doctors with interest and many in the profession are looking for clearer definitions of what is permissible in reports of interviews or published statements in the lay press or the use of one's name in connection with business organizations. The attitude of the committee seems to furnish quite definite conclusions in this particular instance. If still broader conclusions and definitions are forthcoming they will be welcomed by those who wish to adopt approved customs. Until some definite standards relating to publicity by physicians are outlined confusion will exist in the minds of some well-intentioned persons.

The committee has clearly defined opinions which are in accord with the best thought in the profession and has full power to deal with the situation. The suggestion that the members of the society give careful consideration to the whole problem will stimulate discussion and tend to crystallize opinion. We sincerely hope that the request of the committee will bring about the object desired.—Editorial, *New England Journal of Medicine*.



# MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

## Pediatrics

**P**arenteral Infections and Infantile Diarrhea. The relationship between parenteral infections and infantile diarrhea has been emphasized so frequently within the last few years that there exists a somewhat distorted view of its importance. As a result of unusual publicity, the belief that diarrhea and middle-ear infections are closely related has become firmly established. However, there have always been a number of pediatricians who are skeptical of the importance of this relationship and who are fearful lest innumerable unnecessary mastoid operations become a routine therapeutic procedure.

The presence of pus in the middle ear of children who have died of diarrhea is by no means a recent discovery, and there seems no need to manufacture a syndrome and rename it after a man who has simply popularized a previously known fact. Marriott, himself, states that the presence of pus in the mastoid antrum in these cases was first noted by du Verney in 1584. As this is often the only abnormal change found at autopsy, the pathologists are wont to place the blame for the entire illness on this finding. This view was strongly opposed by Czerny, the celebrated German pediatrician, and in an address delivered at Strassburg nearly twenty years ago he stated his views as follows: "This unsatisfactory state of our knowledge has led to the laying of altogether too much importance on the secondary infections of atrophic children. This is especially true of otitis media. As a matter of fact, pus is often found in the middle ear of children who have died in a condition of atrophy. A natural result of this finding was the belief that bacterial products of a poisonous kind could be absorbed from the purulent areas produced by these bacteria, and that in consequence the atrophy is nothing more than the result of a septic intoxication. The question was never asked of the clinician whether the otitis media first appeared when the child was already atrophic, or whether it ushered in the entire process. The finding of a purulent otitis media was regarded as sufficient ground for teaching physicians that atrophy is the result of otitis media.

"One thing at least can be said for pathologists: they were at all times of one mind. They were at first all fully convinced that there was an intestinal atrophy and they were later convinced that otitis media played a most alarming part in the high infant mortality. This unanimity of opinion was not to be found among the clinicians at any time.

"Atrophy is not a disease per se, but a disturbance in growth and in general nutrition, which is the result of nutritional disturbances, or of infectious processes, or of both. The clinical picture may be the same in all these instances, but a differentiation based on etiology is of great importance to us on account of prophylaxis and therapy. If the disease is a nutritional disturbance, splendid results can be obtained by dietetic management. If, however, an infection which we cannot therapeutically influence is the exciting factor, we are often placed in a position where we can neither check nor cure the atrophy."

A recent discussion of this question by Dr. Oscar Schloss indicates again the lack of proof that otitis media is a causative factor in the production of severe diarrhea. At a meeting at the New York Academy he mentioned some of the outstanding objections: "There is much evidence against Doctor Marriott's views. Diarrhea is not a common symptom of clinical mastoiditis. Otitis media, which is always accompanied by pus in the mastoid antrum, is an extremely common disease and is rarely accompanied by severe diarrhea. The mastoid antrum and middle ear of infants are exceedingly small and a toxin must be extremely powerful and absorption very active to cause the severe symptoms of intestinal intoxication."

Still more interesting is the statement that "of fifty-one postmortem examinations in cases of diarrhea and dehydration for the past four years at the New York Nursery and Child's Hospital, pus was found in the middle ear and mastoid antrum in thirty-nine cases. In no case was a true mastoiditis with involvement of the bone present."

From the foregoing it is at once evident that the question is by no means settled, and a final judgment, at least temporarily, must be deferred. The situation is summed up by Doctor Schloss, who says: "Despite all theoretical objections, it would seem that the proof of Doctor Marriott's view must rest on a therapeutic test. If he can show that by early operation on the mastoid antrum the mortality from diarrhea is substantially less than by other methods, it will go a long way toward proving his view."

Finally, one more point deserves attention. The operation, as performed at the St. Louis Clinic, is extremely simple, and carried out so rapidly, that it does little, if any, harm to the patient's general condition. Under local anesthesia a small button of bone is removed over the antrum and a drain inserted. No curettage is done, but a probe is usually inserted through the aditus to

render it patent. Some of the bad results seen in many of the other clinics may be attributed to operators who attempt to do the standard type of mastoidectomy in these critically ill patients.

PHILLIP E. ROTHMAN, Los Angeles.

### Diphtheria

**Synthetic Diphtheria Antitoxin.**—Under the stimulus of the newer concepts of immunology<sup>1</sup> several recent attempts have been made to prepare artificial specific antitoxins. A very suggestive result has recently been reported by Sdrawosmisslow and Kostromin of the Bacteriological Institute, Perm, Russia.<sup>2</sup> These workers incubated diphtheria toxin with a large excess of trypsin, and obtained a nontoxic toxin "trypsinate" which, in their hands, was apparently identical with true diphtheria antitoxin.

Although Kimmelstiel of the Hygienic Institute, Breslau, Germany<sup>3</sup> has recently questioned this conclusion, offering an alternate explanation of their observed antitoxic effects, she does not question their claim that their "trypsinate" has distinct antitoxic properties.

W. H. MANWARING, Stanford University.

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1. The Newer Knowledge of Bacteriology and Immunology, University of Chicago Press, Chap. 81, p. 1078.
2. Ztschr. f. Immunitätsforsch u. exper. Therap., Vol. liv, p. 1, 1927-28.
3. Ibid., Vol. lxii, p. 245, 1929.

### Medicine

#### PART II\*

**The Present Status of Liver Function Tests.** It is a very different story with the excretion tests of liver function. Here we have at our command at least three reasonably simple tests of which we can expect definite information in regard to suspected liver injury in individual cases. In the first place, there is the quantitative estimation of serum bilirubin by means of Bernheim's icterus index,<sup>1</sup> or the more complicated quantitative van den Bergh. Then we have the quantitative urine urobilogen test, the simplest of the three, if the Wallace-Diamond technique be used.<sup>2</sup> Finally, one can use one of the dye excretion tests of which the Rose-Bengal<sup>3</sup> test is preferable to others. Below is given a brief discussion on what tests to select and what to expect of them in the more common liver conditions.

1. In *catarrhal jaundice* the icterus index and the dye excretion tests are practically parallel in their reports on the degree of liver injury and the same is true of the urine urobilinogen except that at the height of the disease there is almost

no urobilogen found probably due to almost complete obstruction of the bile passages. Since these liver function tests have taught us that in *catarrhal jaundice* the amount of liver damage is parallel to the depth of jaundice, there is for all practical purposes no necessity of doing them in ordinary cases of this disease.

2. In *obstructive jaundice* of any type the depth of color is a satisfactory measure of the amount of liver damage just as in *catarrhal jaundice*. In addition, here it is often valuable to know, from the standpoint of diagnosis and prognosis, the exact degree of jaundice and especially its trend to increase or decrease. In this respect the icterus index is much more accurate than the eye. In complete biliary obstruction urobilogen disappears from the urine altogether.

3. In *arsenical jaundice* all three tests are positive and about equally reliable. No arsenicals should be given till the return of function to normal, as shown by one or more of these tests.

4. *Carcinoma of the liver* and bile ducts with obstruction belongs in the class of obstructive jaundice. In carcinoma of the liver without obstruction, dye excretion seems to be impaired most often (in about 70 per cent of cases in one series), an increased icterus index is a close second (in about 60 per cent) and increase in urobilogen comes third with positive results in only 40 per cent of cases. The explanation for such poor results is that carcinoma involves the liver only in spots, leaving much healthy liver tissue for compensation of function. From this it can be said that in suspected cases of carcinoma of the liver only positive results are of value.

5. *Cirrhosis of the liver*, whether of the portal or biliary type, always shows a reduction of dye excretion, the extent of which is a reliable guide to the degree of liver damage. This fact is of special importance since the icterus index only shows the presence or absence of latent jaundice in portal cirrhosis and the degree of jaundice in biliary cirrhosis, while the increase in urobilogen is by no means a constant factor in cirrhosis as well as in other chronic liver conditions. The dye test is of special value in differential diagnosis of portal cirrhosis in the presence of ascites because dye excretion is normal in cardiac failure, tuberculous peritonitis, and carcinomatosis of the peritoneum. On the other hand, urobilogen is often increased in chronic passive congestion of the viscera.

6. In *severe infections of the liver* both the dye retention and increase in urine urobilogen are marked and express the degree of liver involvement, while the increase in the icterus index may be slight.

7. Finally, in *diseases of the hematopoietic system* like hemolytic jaundice, pernicious anemia, polycythemia, leukemia, and Gaucher's disease, dye elimination is normal. In Banti's disease dye retention indicates the presence of cirrhosis of the liver. The icterus index in these conditions serves merely as an index of hemolysis and urine

\* Part I appeared in the January issue of California and Western Medicine.



urobilogen is usually increased in cases of excessive blood destruction.

Before closing I would like to say that I do not share the opinion often expressed that liver function tests compare unfavorably with kidney function tests. If we take as an example the dye excretion tests, the two most frequent criticisms are: First, that it does not express the impairment of all functions of the liver, and, second, that when the test is positive there are already other signs of liver disease present. But precisely the same is true of the phthalein test for kidney function: While the retention of the dye roughly corresponds to that of nitrogenous products in the blood, it gives us no idea in regard to water or salt retention. Also one usually does not do the phthalein test unless there are some clinical indications of kidney damage and, I might say, unless another excretion test of the kidney, namely, a urine analysis, has shown some abnormalities.

The conclusion from this review of liver function tests is that, by judicious selection of one or more from the three discussed excretion tests, it is possible in most cases to confirm a suspicion of liver damage when it is present and to gain some conception of its extent.

T. L. ALTHAUSEN, San Francisco.

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2. Wallace, J. B., and Diamond, J. S.: The Significance of Urobilinogen in the Urine as a Test for Liver Function, Arch. Int. Med., 35:698, June 1925.
3. Epstein, N. N., Delprat, J. D., and Kerr, W. J.: The Rose-Bengal Test for Liver Function, J. A. M. A., 88:1619, May 21, 1927.

#### Allergy

**Acute Articular Rheumatism an Allergic Manifestation.**—Swift has recently suggested that acute articular rheumatism is a manifestation of allergy. It has long been known that there is a relationship between tonsillitis and the joint infection. With the allergic conception this seems satisfactorily explained.

When the primary infection is in the tonsils, the streptococci and the protein derived from them gain access to the blood stream; and, in the same manner as in tuberculosis, the body cells are rendered sensitive to streptococci and their products.

There are certain tissues which streptococci are prone to infect, among which are the heart valves and joint structures. These localizations are probably selective, the same as the tonsils are the location of choice in the primary streptococcus infection and in diphtheria; and Peyer's patches in typhoid fever.

Streptococci may escape from the tonsillar infection and circulate in the blood in small quantities, the same as tubercle bacilli, without producing illness. But let them become implanted in a joint or in the heart valves and an immediate reaction occurs, differing according to the nature

of the tissues in the two situations. In both instances the cells have been sensitized by the circulating streptococcus protein. In the former the allergic reaction shows as a predominantly exudative process which later may become predominantly proliferative or may disappear by absorption of the exudate. Large quantities of serum may be poured out in the joint just as large effusions occur in the pleura when it is the seat of an allergic reaction in tuberculosis. In the heart valve, on the other hand, the tissues are dense and the reaction, while inflammatory, shows a preponderance of proliferation and a minimum of exudation. The after course of the infection will depend on its severity and upon whether or not the allergic reaction is kept up for a period of time by further quantities of streptococci and streptococcal products gaining access to the blood stream and coming in contact with the joint or valvular tissues. Where the tonsils are furnishing the source of repeated reinoculations, immediate tonsillectomy should relieve the exacerbations, unless further reinoculation is caused by the trauma of the operation. Owing to the fact that there is great danger of reinoculations following tonsillectomy during acute inflammation, it is a very questionable procedure, however, and should be done only after most careful consideration. If no new exacerbations are taking place, the removal of the tonsils can await recovery of the joint.

F. M. POTTINGER, Monrovia.

Medical History Course at University of California School of Medicine.—The University of California Medical School will inaugurate a new course in the field of medical history and bibliography with the opening of instruction for the spring semester on Tuesday, January 14, according to an announcement just made by Dr. Langley Porter, dean of the school.

In order to provide instruction in these subjects two appointments to the faculty have been made. Dr. LeRoy Crummer of Omaha, Nebraska, has accepted appointment as clinical professor of medical history and bibliography, beginning this month, and Dr. Sanford Larkey has been appointed assistant professor of medical history and bibliography, effective July 1, 1930.

Doctor Crummer visited California in January, 1929, to give a series of lectures on old medical books and medical history. To illustrate his lectures he brought with him part of his own collection of rare books which is one of the best in the country. The portion that he brought with him was valued at \$96,000.—*University of California Clip Sheet.*

#### The Surgeon's Hands

His face, I know not whether it be fair  
Or lined and grayed to mark the slipping years,  
His eyes, I do not glimpse the pity there.  
Or try to probe their depths for hopes or fears.  
Only upon his wondrous hands I gaze.  
And search my memory through so fittingly  
To voice their loveliness, in still amaze  
I bow before their quiet dignity.  
They make the crooked straight and heal old sores,  
The blind to see, the war-torn clean and whole.  
Throughout the suffering world they touch the doors  
That open wide to life, the bitter bowl  
Of pain they sweeten till the weary rest,  
As though the hands of Christ had served and blest."

—Ida Norton Munsen.

# STATE MEDICAL ASSOCIATIONS

## CALIFORNIA MEDICAL ASSOCIATION\*

MORTON R. GIBBONS.....President  
LYELL C. KINNEY.....President-Elect  
EMMA W. POPE.....Secretary

### OFFICIAL NOTICES

**Next Council Meeting.**—A special meeting of the Council of the California Medical Association has been called for Saturday, March 1, at 10 a. m., at the home of Doctor Kress, Uplifters Club, Santa Monica.

**Optional Medical Defense.**—"I think my membership lapsed this year. Will you see if I am entitled to assistance?" is a telephone message that comes to your state office more than once. Recently, the call was from a member who had carried insurance continuously from 1924 to 1929. His suit was for \$100,000, the usual modest sum demanded by the present disgruntled patient. Protection for 1930 has since been secured, and probably will hereafter be carried so long as optional defense is available.

Ten dollars may loom large when no suit is threatening, but it shrivels to a paltry sum in the face of definite court action.

Members who, when suit threatens, will want the counsel of the Association's legal advisers can secure it through Optional Medical Defense service at the nominal figure of \$10 a year. Favorable decision now may save years of regret. Cards of application and more detailed information will be sent on request. Address 2004, Four Fifty Sutter Street, San Francisco.

**Hotel Rates for Annual Session.**—Members who plan to attend the annual session at Hotel Del Monte, April 28 to May 1, inclusive, will be interested in the following information.

Every member should make his reservation early, and insist on confirmation of same.

#### Hotel Del Monte American Plan

Single room without bath (one person), \$8.

Double room without bath (two persons), \$7.50 each.

Single room with bath (one person), \$10.

Double room with bath (two persons), \$9 each.

Two single rooms, bath between (two persons), \$9.50 each.

Two double rooms, bath between (four persons), \$8.50 each.

If all available space is utilized, six hundred members can be accommodated. It is hoped that members will bear in mind the necessity for utilizing double rooms as much as possible.

\* \* \*

#### San Carlos Hotel, Monterey European Plan

Single room, shower bath, \$2.50 and \$3.

Double room, shower bath, \$4.50.

Double room, tub bath, \$5.

Twin-bedded room, tub bath, \$6 to \$7.

Extra cot in room, \$1.50 each.

\* For a complete list of general officers, of standing committees, of section officers, and of executive officers of the component county societies, see index reference on the front cover, under Miscellany.

#### Pebble Beach Lodge

##### European Plan

Single room with bath, \$7 to \$12.

Double room with bath, \$8 to \$14.

\* \* \*

#### Kimball and Monterey, Monterey

##### European Plan

Rooms range from \$1.50 to \$4.50.

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#### Luncheon and Dinner Rates at Del Monte

For members stopping in other hotels during the convention, Hotel Del Monte has made a special price for luncheon of \$1.50 and for dinner, \$2. Ticket may be purchased at the cashier's window, or at the entrance to the dining room, before each meal.

## COMPONENT COUNTY SOCIETIES

### ALAMEDA COUNTY

The regular meeting of the Alameda County Medical Association was held in the auditorium of the Board of Education's new administration building at 8:15 p. m. Doctor Meads was in the chair. The evening was devoted to a clinic by Dr. L. F. Barker, professor emeritus of medicine of Johns Hopkins University.

Doctor Barker discussed four cases, the first a case of polyposis of the colon in which the x-ray pictures were diagnostic of the condition and in which x-ray therapy brought about almost complete cure. Doctor Barker pointed out the fact that the x-ray is absolutely diagnostic in this condition and the further fact that there is a definite relation between polyposis of the large bowel and carcinoma of the rectum, so much so that the doctor prophesied rectal cancer as an ultimate lesion in this patient. The use of x-ray therapy is interesting in view of the fact that this is one of the first cases of the kind successfully treated by this agent.

The second case was a man who had been operated on five months ago for a large toxic goiter, with marked temporary postoperative improvement for a few months and later a recurrence of all symptoms. Doctor Barker demonstrated all of the characteristic eye signs of this condition, and in the discussion of the treatment suggested the possibility that an enlarged thymus was playing an important part in the condition and advised x-ray and sedative treatment such as luminal together with small doses of iodine, with the mental reservation that surgery might later be necessary.

The third case demonstrated was a man of forty-one years who had a typical history of ulcer of many years standing with many signs which at the present time suggest the possibilities of malignancy.

The fourth case demonstrated presented central nervous manifestations with many symptoms of hysteria but with a definite increase in the spinal fluid globulin, a slight leukocytosis, and a temperature of 102. Doctor Barker suggested the possibilities of a central nervous infection, particularly of an encephalitic type, and predicted the development within six months of a Parkinsonian syndrome.

Following the clinic, Dr. Clarence W. Page read an "In Memoriam" to Frank W. Simpson, and the meeting adjourned out of respect to the memories of Doctors Frank W. Simpson and Ilo R. Aiken, both of whom had been called by death within the month.

GERTRUDE MOORE, *Secretary*.



## CONTRA COSTA COUNTY

The Contra Costa County Medical Society met at Memorial Hall, Crockett, on January 14, Doctor Bungarner presiding. Dr. John Scudder of Oakland read a very interesting paper on the "Errors in Diagnosis of Appendicitis." The doctor gave a very complete review of the literature on the subject and discussed the differential diagnosis of appendicitis in detail. Operative failures from chronic appendicitis were attributed to improper diagnoses. The relapsing form of chronic appendicitis is the most successful, from an operative standpoint. Much hearty discussion of Doctor Scudder's paper was participated in by members.

At the request of the Contra Costa Public Health Association a resolution was unanimously passed favoring the investigation by the County Board of Supervisors of the advisability of hospitalizing tuberculous cases from this county in Sunshine Camp instead of Weimar Sanitarium, and assuring them of the coöperation of the society in this health problem. Dr. I. O. Church, county health physician, reported on the work being done by the Contra Costa Public Health Association. Dr. J. M. McCullough was appointed delegate to the next executive board meeting of the Association to be held February 2 at Sunshine Camp.

Important business matters, such as fee schedule and membership dues, were also discussed, but no action was taken.

While the society was having its scientific meeting the physicians' wives met at the home of Mrs. J. M. McCullough for the purpose of forming a woman's auxiliary to the medical society. Formation of this auxiliary was voted, with officers as follows: President, Mrs. J. M. McCullough of Crockett; first vice-president, Mrs. L. H. Fraser of Richmond; second vice-president, Mrs. H. D. Neufeld of Bay Point; secretary, Mrs. S. N. Weil of Rodeo.

After the business meeting a delightful supper was served to members of the society and auxiliary and guests at the Crockett Memorial Hall. Dr. and Mrs. McCullough were the hosts.

A symposium on respiratory diseases by members of the society was announced as the program of the next meeting.

L. H. FRASER, *Secretary*.



## FRESNO COUNTY

The regular monthly meeting of the Fresno County Medical Society was held Tuesday, January 7, at 8 p. m. at the Hotel Fresno. Forty members were present.

The minutes of the previous meeting were read and approved.

It was moved by Doctor Tupper, seconded by Doctor Vanderburgh, that Dr. K. D. Luechauer's application for membership in the society be accepted.

The president appointed the following committees for the year:

Board of Censors—Harry J. Craycroft (chairman), B. B. Lamkin, D. I. Aller.

Ethics Committee—John D. Morgan (chairman), E. R. Scarboro, Neil Dau.

Library Committee—H. O. Collins (chairman), G. A. Hare, Guy Manson.

Program Committee—C. M. Vanderburgh (chairman), Kenneth J. Staniford, L. R. Willson.

Welfare Committee—A. B. Cowan (chairman), J. R. Walker, C. P. Kjaerbye.

Publicity Committee—C. O. Mitchell, E. L. Bennett, A. E. Anderson.

Dr. W. F. Wiese was appointed to audit the society's books for the year 1929.

Dr. Julian M. Wolfsohn, psychiatrist of Stanford University, gave a talk on "Symptomatic and Idiopathic Epilepsies," which was very much enjoyed. The symptomatic epilepsies he divides into those due to brain tumor; traumatic epilepsy; syphilis; toxic epileptiform convulsions, which are commonly due to alcohol; those associated with arteriosclerosis and

cardiovascular diseases; those associated with acute infections, especially scarlet fever; and the convulsions of infancy and childhood. These form the connecting link with the next class, namely, idiopathic epilepsy.

Doctor Wolfsohn discussed in detail the different forms in which the seizure appears and reviewed the various methods of treatment. In treatment, Doctor Wolfsohn adheres to sodium bromid, fifteen to twenty grains three times a day, and in cases of petit mal he gives, in addition, three to four minims of tincture of belladonna three times a day. The first dose of sodium bromid is taken in the morning before getting up. When the attacks are not controlled by this method, three-quarters of a grain of luminal are given at bedtime.

Meeting adjourned.

J. M. FRAWLEY, *Secretary*.



## NAPA COUNTY

The regular meeting of the Napa County Medical Society was held Wednesday, January 8, at the new Victory Hospital. The members of the medical society were guests of the hospital board of directors, who provided a delicious dinner preceding the business meeting. The new Victory Hospital is a modern, fireproof structure of thirty-three beds, and fills a much needed want in the community.

Dr. George Dawson, president, opened the business meeting. The minutes of the previous meeting were read and approved. Dr. Orville Rockwell of the St. Helena Sanitarium and Dr. C. E. Sisson of the Napa State Hospital were admitted to membership by transfer from the San Francisco County Medical Society and the Mendocino County Medical Society.

The speaker of the evening, Dr. Edmund Butler, chief of the San Francisco Emergency Hospitals, gave a valuable talk on "The Equipment of the Emergency Room in a Hospital" (illustrated with lantern slides), and discussed some of the problems to be met. He also exhibited and discussed a motion-picture reel of some European clinics which he recently visited. This was followed by an informal discussion of his subject. There were twenty-two physicians present, including the speaker, Dr. Bull, of the Shriners' Hospital for Crippled Children, San Francisco; Dr. James Eaves of Oakland and Dr. Michelson of Lane Hospital, San Francisco.

Members present were: George Wood, D. H. Murray, C. E. Nelson, Robert Northrup, H. V. Baker, A. K. McGrath, W. L. Blodgett, George I. Dawson, C. A. Johnson, Robert Crees, L. Welti, C. H. Bulson, H. R. Coleman, E. F. Donnelley, I. E. Charlesworth, C. A. Gregory. Visitors: C. E. Sisson, A. E. Chappel.

The president, Dr. George Dawson, was given authority to appoint a committee to confer with the state society relative to a conference with the legal profession concerning malpractice suits.

Meeting adjourned.

C. A. JOHNSON, *Secretary*.



## ORANGE COUNTY

The forty-second annual banquet of the Orange County Medical Association was held January 7 at the Santa Ana Country Club, Santa Ana. Approximately one hundred members and their wives were present. A delightful menu and program, with Dr. Merrill W. Hollingsworth as toastmaster, helped to make this evening a pleasant and successful social event of the year.

A most interesting talk was given by Dr. F. Harold Gobar of Fullerton, retiring president, on "Medical Libraries." Our own medical library is now well started and all members of the society have the privi-

lege of using it. Other delightful talks were given by Mrs. F. E. Coulter and Judge Frank C. Drumm.

Mrs. F. E. Coulter is president of the Woman's Auxiliary of the society, just recently organized. Judge Frank C. Drumm gave the principal address of the evening on "Medical Ambitions." Several musical numbers were interspersed between these talks.

At the end of the meeting the following members of the society were introduced as officers for the year 1930: H. Miller Robertson, president; Emerald J. Steen, vice-president; Harry G. Huffman, secretary-treasurer; Charles D. Ball, librarian. Councilors: Jay L. Beebe, Dexter R. Ball, George M. Tralle. Delegate, Dexter R. Ball; alternate, George M. Tralle. Delegate, Harry E. Zaiser; alternate, William S. Wallace.

HARRY G. HUFFMAN, *Secretary*.



#### SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society was called to order by the president at 8 p. m. January 7.

Minutes of the previous meeting were read and approved.

The following men were accepted to membership by unanimous vote: Dr. C. W. Moots, Dr. S. A. Crooks, and Dr. F. H. Garrett.

The program of the evening was then given.

A motion picture on "Infection of the Hand" by Doctor Kanavel was presented through the courtesy of the College of Medical Evangelists at Loma Linda by Dr. G. M. Taylor of Los Angeles.

A paper on "Fractures and Dislocations of the Hand Excluding the Radius and Ulna" by Dr. Philip Stephens of Los Angeles followed.

The discussion of these papers was conducted jointly, and opened for the first paper by Dr. Philip Savage of San Bernardino and for the second paper by Dr. K. L. Dole of Redlands.

Members who had interesting or unusual cases of infection or injuries of the hand, past and present, were invited to present these cases as part of the discussion.

Supper was served at 10:30 o'clock.

Doctor Savage was called away and Doctor Hilliard opened the discussion in his absence.

There were about forty in attendance.

E. J. EYTINGE, *Secretary*.



#### SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday evening at 8:30 o'clock, January 2, in the Medico-Dental Club, 242 North Sutter Street, Stockton.

The meeting was called to order by Dr. C. V. Thompson, president, who immediately turned the chair over to Dr. Harry E. Kaplan, the newly elected president. The minutes of the previous meeting were read by Dr. Fred J. Conzelmann, secretary, and approved. After appropriate remarks, Doctor Conzelmann, who has most efficiently served as secretary-treasurer for four years, called to the chair the new secretary-treasurer, Dr. C. A. Broadus.

The scientific program was opened by Dr. Emmet Rixford of San Francisco with a report on coccidioidal granuloma illustrated by slides, showing the gross and microscopic pictures of the lesions.

The principal paper of the evening was presented by Doctor Rixford on the subject of "Postoperative Treatment in Abdominal Surgical Cases."

The doctor evidently disapproves the use of much treatment and therapeutic frills. He quoted from his former teacher, Dr. Clinton Cushing, who often admonished his students with the phrase, "Don't fuss!" He further quoted the great French surgeon, Ambroise Paré, who said, "I dressed his wound, but God healed it."

"A patient who is sanely prepared for operation by rest, mild catharsis, and simple cleansing of the site of incision stands the best chance for rapid recovery. The proper maintenance of body warmth in the patient during operation without excessive heat and humidity in operating room is highly essential.

"To avoid shock and postoperative adhesions it is essential to handle the intestines as little as possible and to keep them within the abdomen.

"After operation keep the patient quiet, without visitors, and use narcotics. Allow time for peristalsis to start before giving food, but try to anticipate the appearance of acetone, which demands the resumption of feeding. Vomiting is to be controlled by emptying the stomach by lavage, being sure there is no intestinal obstruction, which is always to be suspected.

"The most suitable remedy in shock is transfusion from a proper donor. Caffein in two to three grains every two or three hours is very valuable. Tyramin, one-third grain hypodermically, is valuable for quick action; digitalis derivatives for sustained action.

"Normal urination does not occur ordinarily for twelve to twenty-four hours and stimulative aids should be patiently tried before resorting to the use of a catheter. Even catharsis is to be used with care, and only after resort to milder methods has failed. The use of pituitrin to stimulate peristalsis is regarded with disfavor.

"Postoperative pain is best controlled by morphia. Many patients sleep comfortably the first night if they receive an enema of opium and chloral. For gas pains the best treatment is with hot moist compresses. Peritonitis is controlled by the time-honored opium treatment. Hypodermic injection of serums, prepared from intestinal bacteria, is of great value, but best of all is the use of a proper bacteriophage.

"Prophylaxis is the proper procedure in venous thrombosis by omitting the use of catgut sutures for wound closure and maintaining blood pressure by proper methods."

Doctor Conzelmann, the retiring secretary, spoke next on the "Ethics of Psychiatry," the study of the structure of the mental life and of its functional disorders. Ethics, on the other hand, deals with the standards of right and wrong. It deals with what ought to be, rather than what actually is. Psychiatry, by virtue of its intimate survey of the mental life and of the personality, is particularly concerned with the remaking of human nature and of the world on which we live. The descriptive data which mental science offers is of great importance to the student of ethics and equally the consideration of ethical values is of great importance to the creed of the psychiatrist. Psychiatry presents us with distinctive mental types; it is a study of individual differences, individual capacities. Its practical purpose is to remove obstructions, conflicts and repression, to obtain adequate adjustment.

The discussion of papers was led by Dr. J. D. Dameron and Dr. Linwood Dozier.

At the roll call the following members were present: Drs. E. A. Arthur, Barnes, Blackmun, Blinn, Broadus, Buchanan, Conzelmann, Dameron, Doughty, Dozier, English, Foard, Frost, Goodman, Hansan, Hull, Kaplan, Krout, McCoskey, McGurk, McNeil, Marnell, O'Donnell, Owens, Petersen, Pinney, B. J. Powell, D. R. Powell, Priestly, Sanderson, Sheldon, M. H. Smyth, C. V. Thompson, Van Meter. Visitors



present were: Mrs. Rixford and Drs. Sutton, Vanderleek, Kilgore, and Weiss.

There being no further business the meeting was adjourned at 11:15 o'clock and refreshments were served.

C. A. BROADDUS, *Secretary*.



#### SAN MATEO COUNTY—SANTA CLARA COUNTY

The December meeting of the San Mateo Medical Society was held in conjunction with the Santa Clara Medical Society at the Oak Tree Inn, San Mateo, December 18. Following dinner the meeting was turned over to the president of the Santa Clara Society, who introduced the speakers of the evening, members of the Santa Clara Society.

Dr. Charles A. Fernish gave a paper on "Injection Method of Treating Varicose Veins." Dr. L. M. Rose presented a paper on "Pathology of the Heart," accompanied by records of cardiac rhythms. Dr. J. H. Shephard treated the subject of "Pathology of the Esophagus," very comprehensively. The discussions were instructive, and were enjoyed by the members of both societies.

The joint meeting was attended by a good representation from each society, about forty-five being present.

ERMA B. MACOMBER, *Secretary*.



#### STANISLAUS COUNTY

The Stanislaus County Medical Society held its regular meeting on January 10. The meeting was called to order by President Hiatt. Members present were: Doctors Collins, Cooper, Finney, Morris, McKibbin, Bemis, Mottram, Yocum, Morgan, Maxwell, Fields, Downing, Gould, Hartman, DeLappe, Robertson, Hiatt, Pearson, McPheeters, and Ransom.

The minutes of the previous meeting were read and approved.

A letter from the County Nurses' Association asking the Medical Association if they desired the nurses to start a physicians and surgeons' exchange, was read. The letter was tabled for further information.

The secretary made a report of a meeting held the previous week of representative Modesto business men when the advisability of building a new hospital in Modesto was discussed. President Hiatt appointed a committee of six doctors to meet with this committee: Doctors DeLappe (chairman), Gould, Maxwell, Morgan, Falk, and Collins.

The new county charter was discussed by various members and it was the consensus of opinion that the members should vote against it.

Dr. Sterling Bunnell of San Francisco gave a very interesting talk on the subject "Nerve Surgery."

Meeting adjourned.

DONALD L. ROBERTSON, *Secretary*.



#### VENTURA COUNTY

The January meeting of the Ventura County Medical Society was held on January 14 at the Clinic building of the Ventura County Hospital at 8 p. m. The meeting was called to order by Vice-president W. S. Clark.

Those present were: Doctors Armitstead, Bardill, Bianchi, W. S. Clark, D. G. Clark, Coffey, Felberbaum, Jones, Schultz, Smolt, and Welsh. Doctors Henry J. Ullmann and Richard Evans of Santa Barbara were present as guests.

Doctor Ullmann, president-elect of the American Radium Society, gave an extremely interesting lecture illustrated by lantern slides. His subject was the treatment of malignant disease by the use of radium, x-ray, and chemotherapy. The lecture dealt chiefly

with skin cancer, though a portion of it was devoted to cancer of the cervix.

Due to lack of time, no business meeting was held after the lecture and the meeting was adjourned.

CHARLES A. SMOLT, *Secretary*.

#### CHANGES IN MEMBERSHIP

##### New Members

*Alameda County*—Clarence S. Gardner and Harold Philip Maloney.

*Kern County*—Seymour Strongin and Mark A. Williamson.

*Placer County*—Arthur William McArthur and Ralph B. Miller.

*Santa Clara County*—Harry Beal Torrey and Frank I. Putnam.

##### Transferred Members

Christopher Leggo, from San Francisco to Solano County.

Eugene C. Grau, from Humboldt to Alameda County.

##### Deaths\*

**Browning, Frederick William.** Died at San Francisco, December 30, 1929, age 64 years. Graduate of the Royal College of Physicians and Surgeons, Edinburgh, Scotland, 1888. Licensed in California, 1894. Doctor Browning was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

**Draper, Alfred Lawrence.** Died at San Francisco, January 3, 1930, age 55 years. Graduate of Cooper Medical College, San Francisco, 1900. Licensed in California, 1901. Doctor Draper was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Jacobs, Edward H.** Died at Los Angeles, December 21, 1929, age 51 years. Graduate of Rush Medical College, Chicago, 1903. Licensed in California, 1911. Doctor Jacobs was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

**McKinnon, Wilfred Charles.** Died at San Francisco, December 20, 1929, age 30 years. Graduate of the University and Bellevue Hospital Medical Colleges, New York, 1925. Licensed in California, 1928. Doctor McKinnon was a member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

**Munroe, Harrington Bennett.** Died at Los Angeles, December 17, 1929, age 52 years. Graduate of McGill University Faculty of Medicine, Montreal, Quebec, 1903. Licensed in California, 1917. Doctor Munroe was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

**Shiels, John Wilson.** Died at San Francisco, December 30, 1929. Graduate of Royal College of Physicians and Surgeons, Edinburgh, Scotland, 1895. Licensed in California, 1898. Doctor Shiels was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Sweeney, George J.** Died at San Francisco, December 27, 1929. Graduate of University of California Medical School, San Francisco, 1900. Licensed in California, 1900. Doctor Sweeney was a member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

**Tate, C. Francis S.** Died at Los Angeles, December 16, 1929, age 56 years. Graduate of University of Southern California School of Medicine, Los An-

\* Erratum.—Correction is hereby made of the notice of death of Joseph Alexander Parker, M. D., of Los Angeles, which appeared in the November issue, page 367. The notice should have read, "Dr. J. A. Parker of San Francisco."

geles, 1895. Licensed in California, 1895. Doctor Tate was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

**Thompson, Roy Oliver.** Died at Calexico, December 22, 1929, age 43 years. Graduate of University of Southern California School of Medicine, Los Angeles, 1914. Licensed in California, 1914. Doctor Thompson was a member of the Imperial County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

## OBITUARIES

### John Wilson Shiels

On December 30, 1929, John Wilson Shiels passed away at the Franklin Hospital following a laparotomy designed to relieve, if possible, a digestive disturbance that had interfered seriously with his comfort and well-being for some time.

Born in San Francisco, he graduated from the School of Medicine of the Royal Colleges at Edinburgh in 1895. At this time he also became a licentiate of the Royal College of Physicians, Edinburgh, of the Royal College of Surgeons, Edinburgh, and of the Royal Faculty of Physicians and Surgeons of Glasgow.

During his period of study in Edinburgh he found time to become a noted swimmer and amateur middle-weight boxer and to play football for his college. Above all, he was outstanding in his activities in the drama. He was a leading light in the Edinburgh Dramatic Society and served as its president for several years.

He returned to San Francisco and was licensed to practice medicine in California in 1898 and began to build that reputation for skill, clinical judgment and broad human kindliness which endeared him to his patients and to the profession.

He joined the medical faculty of the University of California in 1906 and at the time of his death was a clinical professor of medicine in the medical school. He was instrumental in organizing the San Francisco Polyclinic and was one of its mainstays for many of its best years.

He was always proud of his association with the Medical Corps of the United States Army. He received his commission among the first when the Medical Reserve Corps was formed in 1907, and this commission, signed by Theodore Roosevelt, was always cherished by him. On the entry of the United States into the war in 1917 he was immediately commissioned Captain, National Army, and shortly received his majority. He was on duty as chief of the medical service at Letterman General Hospital, which hospital he actually commanded for a short period. He gained golden opinions from every one and when the Reserve Corps was reorganized after the war he was commissioned Lieutenant-Colonel and five years ago received his commission as Colonel.

For the past eight years he was active as chief of the Department of Internal Medicine of the Franklin Hospital, and his ability, personality, energy and brilliant attainments helped largely to place the Franklin Hospital among the best hospitals of San Francisco.

His histrionic ability and his love for play writing gave him ample opportunity for literary and artistic expression. In 1908-09 he was president of the Bohemian Club and in 1914 he wrote the Grove play, "Nec Natoma." On many occasions he took leading parts in the plays presented by the Bohemian Club.

The qualities of mind and soul which made "Jack" Shiels beloved by his patients, associates and club

fellows, gave him the personality and powers of a great teacher and physician. He was truly both of these, a master of medical lore and a lover of his fellow man—understanding, kindly, self-sacrificing, with a heart that yielded most to those whose need was greatest.

Medicine in California has lost one whom it can ill afford to lose—a great teacher, a great practitioner, a physician whom his colleagues and patients loved and of whom they were proud.

\* \* \*

### AN APPRECIATION OF A GENIUS BY ONE WHO KNEW HIM

Life holds many beautiful things, but little that is more beautiful than the associations that are possible when one has the privilege of working with brilliant minds.

It is probably the most selfish form of pleasure, for one receives so much and can give so little in return. It was my opportunity to have had such a privilege in my association with the late John Wilson Shiels. Man, scholar, friend, athlete, artist, actor and, last but by no means least, physician extraordinary.

ARTHUR COLLIS GIBSON, M. D.

\* \* \*

### George J. Sweeney

By the death of Dr. George J. Sweeney in San Francisco on December 27, 1929, the medical profession has lost one of its valued members.

Dr. Sweeney was born in Petaluma, California, in 1870; received his medical degree from the University of California in 1900. He was a member of the California Medical Association and the San Francisco County Medical Society. For twelve years he served with distinction as medical director of the French Hospital. For the past number of years, and until the time of his death, he devoted himself to general practice.

Dr. Sweeney was typical of the best in the practice of medicine. His life was characterized by devotion of all his powers and skill to the alleviation of the suffering, rendering medical aid to the poor, and to public welfare. His kindness and sympathy to those in need of his services and assistance gained for him an affection on their part and the part of his friends that will linger in their memories forever.

\* \* \*

### Wilfred C. McKinnon

Dr. McKinnon was one of the younger members of the medical fraternity in San Francisco, being twenty-nine years old at the time of his death, Christmas Day would have been his thirtieth birthday.

He took his pre-medical work at the University of California and received his M. D. from New York University and Bellevue Hospital Medical College. Following his graduation from medical college he served two years in Newark City Hospital, Newark, New Jersey, during the concluding six months of which he was house surgeon. Following his internship he spent some time abroad before locating in San Francisco. He had been practicing in this city a little over a year.

He was an able young physician, with a rapidly growing practice and a very promising future. In addition to competency in his profession he had a kind, sympathetic, and charming personality and had a host of friends in this city and elsewhere in Northern California.

He was born in Arcata, California, being the son of Dr. and Mrs. George W. McKinnon of that city, who survive him. Dr. George W. McKinnon is a well-known Humboldt County physician. Besides



his parents he is survived by a brother, Harold R. McKinnon, a San Francisco attorney. He resided with his brother at the University Club, San Francisco.

He was a member of Nu Sigma Nu.

### THE WOMAN'S AUXILIARY OF THE CALIFORNIA MEDICAL ASSOCIATION \*

MRS. H. S. ROGERS.....	President
Sunny Slope Road, Petaluma	
MRS. W. H. GEISTWEIT.....	First Vice-President
810 Medico-Dental Building, San Diego	
MRS. JOHN HUNT SHEPHERD.....	Second Vice-President
145 South Twelfth Street, San Jose	
MRS. R. A. CUSHMAN.....	Secretary-Treasurer
632 North Broadway, Santa Ana	

#### OFFICERS OF COUNTY AUXILIARIES

##### Contra Costa County

President, Mrs. J. M. McCullough, Crockett.  
First vice-president, Mrs. L. H. Fraser, Richmond.  
Second vice-president, Mrs. H. D. Nuefeld, Bay Point.  
Secretary-treasurer, Mrs. S. N. Weil, Rodeo.

##### Los Angeles County

President, Mrs. James F. Percy, Los Angeles.  
First vice-president, Mrs. P. S. Doane, Pasadena.  
Second vice-president, Mrs. B. von Wedelstaedt, Long Beach.  
Secretary-Treasurer, Mrs. Martin G. Carter, Los Angeles.

##### Kern County

President, Mrs. F. A. Hamlin, Bakersfield.  
First vice-president, Mrs. F. J. Gundry, Bakersfield.  
Second vice-president, Mrs. A. R. Moodie, Taft.  
Secretary-treasurer, Mrs. C. S. Compton, Bakersfield.

##### Orange County

President, Mrs. F. E. Coulter, Santa Ana.  
First vice-president, Mrs. H. A. Johnston, Anaheim.  
Second vice-president, Mrs. D. C. Cowles, Fullerton.  
Secretary-treasurer, Mrs. Dexter R. Ball, Santa Ana.

##### San Bernardino County

President, Mrs. F. E. Clough, San Bernardino.  
First vice-president, Mrs. Walter Pritchard, Colton.  
Second vice-president, Mrs. A. L. Weber, Upland.  
Secretary-treasurer, Mrs. C. L. Curtiss, Redlands.

#### ORANGE COUNTY

The second meeting of the Woman's Auxiliary of the Orange County Medical Society was held on Tuesday evening, December 3, 1929, at the Orange County Hospital. The meeting was called to order by Mrs. Clara Cushman, temporary chairman. The minutes of the previous meeting were read and accepted.

Mrs. Cushman read a letter from Mrs. Henry S. Rogers, president of the Woman's Auxiliary of the California Medical Association in which she asked Doctor Gobar to appoint a committee on organization to form a woman's auxiliary in Orange County.

Mrs. Hollingsworth, chairman of the nominating committee, recommended the following names for office: Mrs. F. E. Coulter for president; Mrs. H. A. Johnston for first vice-president; and Mrs. D. C. Cowles for second vice-president.

\*As county auxiliaries to the Woman's Auxiliary of the California Medical Association are formed, the names of officers should be forwarded to the state secretary-treasurer, Mrs. R. A. Cushman, 632 North Broadway, Santa Ana, and to the California Medical Association office, Room 2004, 450 Sutter Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed for publication in this column.

It was recommended by the committee that the secretary-treasurer be elected in open meeting.

Nominations were called for the office of secretary-treasurer, and Mrs. Dexter R. Ball was nominated and elected unanimously.

Mrs. Cushman then asked Mrs. F. E. Coulter to take the chair. Mrs. Coulter gave a short speech of acceptance and told the purpose of the auxiliary and the general need for friendship and social contacts among the doctors and their families.

Motion was then made to adjourn until February 4, 1930, that the auxiliary might meet on the date of the regular meeting of the Orange County Society. Mrs. Grace M. Zaiser gave a series of readings, which were delightful, in the joint meeting.

EDNA M. BALL, *Secretary*.

### UTAH STATE MEDICAL ASSOCIATION

H. P. KIRTLEY, Salt Lake City.....	President
WILLIAM L. RICH, Salt Lake City.....	President-Elect
M. M. CRITCHLOW, Salt Lake City.....	Secretary
J. U. GIESY, 701 Medical Arts Building, Salt Lake City.....	Associate Editor for Utah

#### UTAH NEWS

Recent meetings of the Academy of Medicine, held Thursday evenings on the tenth floor of the Deseret Bank building, have been taken up by the following programs:

December 19—Coronary Occlusion—Clinical and Autopsy. Dr. E. Viko. Abdominal Pain in Children, Doctor Cheney.

January 2—Complications of Peptic Ulcers, Doctor Hatch. Pregnancy Complicated by Bicornute Uterus—Report of Case, Doctor Giesy. Gastroptosis with Spastic Colitis, Doctor Skofield.

January 9—Headache, Doctor Gordon. Care of the Lactating Breast, Doctor Wherritt. Adenitis, Doctor Sugden.

\* \* \*

The Holy Cross Hospital Clinical Association meeting for December was held in the lecture room of the hospital on the evening of December 16.

A short program consisting of a symposium and case reports on "Double Uteri" was given by Doctors T. W. Stevenson and J. U. Giesy. Doctor Stevenson's case was surgical, the condition being discovered at operation. Doctor Giesy's case was one complicated by pregnancy, with a dead fetus and death of the mother from shock after the extraction of the child.

Following the scientific program the report of the treasurer was read and adopted, and officers were elected for the ensuing year. Election resulted in the choice of Doctor Ossman for president and Dr. Fuller Bailey for secretary-treasurer.

Meeting adjourned.

Steamship Firms Coöperating with University of California Tropic Work.—As a means of aiding the University of California in diagnosis, treatment and study of tropical diseases which transoceanic commerce brings to America, ten Pacific Coast steamship owners have subscribed to a Ship Owners' Fund of \$13,750 which will be turned over to the University's Institute of Tropical Medicine at the rate of \$2750 a year for the next five years.

An attempt is now being made to establish related tropical centers in Manila, Shanghai, Honolulu, and Guatemala City. Donations have also been made by other Californians as follows: George Brommel, \$100 for wall charts and lantern slides; Dr. R. K. Smith, \$103.45 for malaria moving-picture film; Hugo Menke, \$65 for hookworm moving picture film, and John Cahill, \$50 for general expense.—*University of California Clip Sheet*.

## MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

### NEWS

**Popular Medical Lectures.**—The Stanford University Medical School announces the forty-eighth course of popular medical lectures to be given at Lane Hall, north side of Sacramento Street, near Webster, on alternate Friday evenings at 8 o'clock sharp. All interested are cordially invited to attend.

January 10—Diabetes, the Cause and Cure, Dr. Horace Gray.

January 24—Some Sanitary Sins of the Orient, Dr. Alfred C. Reed.

February 7—Dental Caries as Viewed by the Bacteriologist, Dr. T. D. Beckwith.

February 21—What Medicine has to Offer the Nervous Patient, Dr. Henry G. Mehrtens.

March 7—Lessons from the Biography of Genius, Dr. Lewis M. Terman.

March 21—Poisonous Animals, Dr. Karl F. Meyer.

**A meeting of the San Francisco Pathological Society** was held January 6 at 8 p. m. at the Southern Pacific Hospital. Ten-minute talks were on the following subjects:

Preliminary Report of Experiments with Cortical Suprarenal Extracts on Malignant Tumors, W. B. Coffey and J. B. Humber.

Stenosis of Esophagus (Probably Congenital) with Carcinoma Arising in the Dilated Esophagus, H. Brunn.

Multiple Myeloma, W. T. Cummings.

Two Spinal Cord Tumors, E. B. Towne.

Adenocarcinoma Arising from Acini of Breast, A. R. Kilgore.

Ruptured Dissecting Aortic Aneurysm, A. A. Berger.

Bone Cyst, J. R. Rinehart.

Presentation of Specimens, D. S. Pulford.

Presentation of Specimens, Fred Proescher.

**The University of Southern California** announces the following appointments in the School of Medicine: Dr. LeRoy Crummer, professor of the history of medicine; and Doctor Verne R. Mason, clinical professor of medicine.

LeRoy Crummer, B. S., M. D., Litt. D., professor of the history of medicine. B. S., University of Michigan, 1893; M. D., Northwestern University Medical School, 1896; Litt. D., University of Michigan, 1929. Postgraduate student at Vienna, Zurich, and London. Professor of medicine, College of Medicine and Graduate School, University of Nebraska, 1919-25; emeritus professor of medicine, 1925.

Verne R. Mason, B. S., M. D., clinical professor of medicine. B. S., University of California, 1911; M. D., Johns Hopkins Medical School, 1915. Intern, assistant resident physician, resident physician, Johns Hopkins Hospital, 1915-21; assistant in medicine, associate in medicine, Johns Hopkins Medical School, 1919-21.

**The Pacific Coast Surgical Association** held their annual meeting at Del Monte on February 7 and 8. Clinics were held in San Francisco two days previously. The officers of the association are: Wallace I. Terry, M. D., San Francisco, president; and Edgar L. Gilcreest, M. D., San Francisco secretary.

**Meeting of San Diego Academy of Medicine.**—Dr. Allen Kanavel of Chicago will give a course of lec-

tures on February 17, 18, and 19 before the San Diego Academy of Medicine on "Infections of the Hand"; "Injuries of the Hand"; and "Diagnosis of Acute Surgical Lesions of the Abdomen."

**Governor Young Appoints Members of the California Board of Medical Examiners.**—The following press dispatch shows the changes made by Governor Young in the membership of the California Board of Medical Examiners.

Sacramento, Jan. 10 (By United Press).—Governor Young today announced appointment of the following members to the State Board of Medical Examiners. They are:

Doctors Harry V. Brown, Glendale, who succeeds H. M. Robertson of Santa Ana, H. A. L. Ryfkogel, succeeding A. W. Morton, both of San Francisco, and George L. Dock, Pasadena, who succeeds Wilburn Smith of Los Angeles.

Those reappointed were: Doctors Percy T. Phillips, Santa Cruz, president; Charles B. Pinkham, San Francisco, secretary and executive officer; W. R. Molony, Los Angeles; and J. L. Maupin, Fresno.

**Greatest American Achievement in Science.**—Search has been started for a miracle worker in science—for an American citizen whose study or experiment bears the promise of achievement of the greatest value to the world.

To the man or woman whose accomplishment in the twelve months prior to June 30, 1930, meets this test, it is announced, *Popular Science Monthly* will award a prize of \$10,000, accompanied by a gold medal. A similar award, the largest in America for scientific accomplishment, will be made annually thereafter.

The award will be bestowed under the auspices of the Popular Science Institute, a research organization maintained by the magazine, of which Prof. Collins P. Bliss, associate dean, New York University, is director. The institute has enlisted the services of twenty-four leaders in American science to serve as a Committee of Award, whose task it will be to select the prize-winning effort.

The prize will be conferred for the first time in September 1930, and the initial period of scientific accomplishment to be considered by the Committee of Award will be the twelve months ending June 30, 1930. All scientific workers, professional and amateur, academic and commercial, are eligible.

The distinguished men comprising the Committee of Award are Dr. Charles G. Abbot, secretary, Smithsonian Institution; Prof. Collins P. Bliss, director, Popular Science Institute; Dr. Samuel A. Brown, dean, New York University and Bellevue Hospital Medical College; Dr. George K. Burgess, director, United States Bureau of Standards; Dr. William W. Campbell, president, University of California; Dr. Harvey N. Davis, president, Stevens Institute of Technology; Dr. Arthur L. Day, director, Geophysical Laboratory, Carnegie Institution; Dr. E. E. Free, consulting engineer; Travis Hoke, editor, *Popular Science Monthly*; Dr. Frank B. Jewett, vice-president, American Telephone and Telegraph Company; Dr. Vernon Kellogg, permanent secretary, National Research Council; Charles F. Kettering, president, General Motors Research Corporation; Dr. Arthur D. Little, president, Arthur D. Little, Inc.; Dr. John C. Merriam, president, Carnegie Institution; Dr. Robert A. Millikan, chairman, executive council, California Institute of Technology; Dr. Henry Fairfield Osborn,



president, American Museum of Natural History; Dr. Elmer A. Sperry, chairman, board of directors, Sperry Gyroscope Company; Dr. Samuel W. Stratton, president, Massachusetts Institute of Technology; Dr. Elihu Thomson, director, Thomson Laboratory of the General Electric Company, Lynn, Massachusetts; Dr. Edward R. Weidlein, director, Mollon Institute of Industrial Research; Henry Herman Westinghouse, chairman board of directors, Westinghouse Airbrake Company; Dr. Albert E. White, director, Department of Engineering Research, University of Michigan; Dr. Willis R. Whitney, director of research, General Electric Company, Schenectady, New York; and Orville Wright, co-inventor of the airplane.

**Iodin Research Program.**—Since January 1, 1928, Mellon Institute of Industrial Research, Pittsburgh, Pennsylvania, has had in operation a Multiple Industrial Fellowship founded for the purpose of investigating the properties and uses of iodine. This fellowship, which is sustained by the Iodin Educational Bureau, 64 Water Street, New York, N. Y., is headed by Dr. George M. Karns, formerly a member of the chemical faculty of the University of Illinois. All results of the fellowship studies will be published.

Recently, through an additional appropriation from the Fellowship donor, Mellon Institute, acting for the Iodin Fellowship, has made arrangements for the study of certain iodine problems in other institutions that have special facilities for such types of work. On October 7, 1929, a scholarship was founded at the Philadelphia College of Pharmacy and Science by a research grant from the institute. This scholarship—which, for the college year 1929-30, will be held by Mr. L. F. Tice—will have for its aim a broad investigation of vehicles and solvents for iodine, especially for external use in medicine. A large number of new organic chemicals will be studied as solvents with the object of evolving, if possible, a more satisfactory preparation than the alcoholic tincture now in use. The research, for which a definite program has been laid down, will be supervised by Prof. Charles H. LaWall with the advisory collaboration of other faculty members of the Philadelphia College of Pharmacy and Science and with the direct cooperation of Doctor Karns. The investigational findings of the scholarship will be reported in the literature.

Another phase of the research program includes a grant made on September 26, 1929, to the Pennsylvania State College for a comprehensive investigation—under the direction of Prof. E. B. Forbes of the Institute of Animal Nutrition—of the nutritional place and value of iodine in the feeding of live stock. Despite the large amount of work which has been done on the rôle of iodine in metabolism, especially with reference to the thyroid, very little is known regarding the specific dietetic aspects of this element, particularly in the lower animals. Doctor Karns and his coworkers on the Iodin Fellowship of Mellon Institute are cooperating closely with Doctor Forbes and his staff, mainly by preparing standardized feeds. The findings of this research also will be made available to the public, in accordance with the Iodin Educational Bureau's policy of disseminating to everyone interested the results of all investigations made under its aegis.

Mellon Institute is giving consideration to the founding of a research scholarship in a medical school for the purpose of aiding in the solution of incompletely answered questions respecting the utility of iodine in internal medicine. A number of pharmacologists are aiding the institute in determining a program for such pharmacodynamic inquiry.

**University of Southern California Appointment.**—The University of Southern California announces the following appointment in the School of Medicine: Robert W. Lamson, B. S., A. M., Ph. D., M. D., associate professor of bacteriology and immunology. Doctor Lamson has been in charge of the allergy clinic, Los Angeles County General Hospital, Unit No. 1, since 1928.

## MEDICAL ECONOMICS

**Hospital Costs.**—The following article is taken from the San Francisco *Examiner* of January 20, 1930:

"The 'other side' of the hospital expense question was stressed yesterday by Dr. Howard H. Johnson, medical superintendent of St. Luke's Hospital, who takes issue with a statement of Dr. Will Mayo that patients in general are paying too much. Doctor Mayo's charge, presented before the meeting of the American College of Surgeons, stimulated nationwide comment.

"Declaring the average bill per patient in the typical general hospital is reasonable, Doctor Johnson points to a study of one hundred bills in one hundred such institutions appearing in the current issue of the *Modern Hospital*. The average bill, he emphasizes, is shown to be 'less than what the average patient of moderate means spends for many of the luxuries that are so common today, yet no criticism is raised as to their cost.'

"In the one hundred hospitals studied,' Doctor Johnson quotes, 'the average bill for the first ten thousand full-pay patients during the present fiscal year was \$71.99, the average duration of stay per patient in fifty-two of these hospitals was 11.04 days, the average bed capacity of the hospitals 186, and their total bed capacity 18,586.'

"Hospitals in thirty-three states are embraced in the surgery, including four in California. Room, board and treatment (hospital care) are responsible for the largest share of the bill, roughly 70 per cent. Use of the operating room or delivery room is the next important item, being from 5 to 10 per cent of the total.

"That hospital privacy is costly is one of the conclusions drawn from the study. 'It is perhaps true that if general hospitals were not expected to provide comfortable and well furnished private rooms it would be possible for them to operate at a lower current cost and consequently reduce their charges. But comfort and privacy in the hospital are popular demands.' Patients throughout are getting value received, in the unanimous opinion of the institutions contributing to the survey."

**The Physician's Income Tax.**—In the January issue of CALIFORNIA AND WESTERN MEDICINE, page 67, was printed an article under this caption. Attention is now called to an article in the *Journal of the American Medical Association* of date of January 11, 1930, page 128, in which is given the information as printed in the January issue of CALIFORNIA AND WESTERN MEDICINE, plus new rulings which have come into play since 1929. The article referred to in the January 11, 1930 *Journal A. M. A.* should be a very handy reference for physicians, whether they make out their own reports or have an auditor or accountant do so.

**An Example Which Explains Much Concerning "The Cost of Medical Care."**—The following item was taken from the Los Angeles *Evening Express* of January 21, 1930. It is a reading notice, to which space was probably given as a return courtesy for an advertisement sent in by the particular radio firm. From the "Two Autos for Every Family" advertising slogan, we now shall possibly witness "A Radio Extension in Every Room" slogan repeatedly played up in the newspapers.

Little wonder, when illness comes, that thousands of lay citizens lack the financial means to pay for the services rendered by hospitals and doctors!

The item referred to above, reads as follows:

### RADIO IN EVERY ROOM PREDICTED

"In 1910 the person who owned one automobile, marked himself from the crowd as being a man of prosperity. Today there are more than twenty-two million passenger cars in this country and many families have two or sometimes three cars.

"In spite of the youth of the radio industry, a similar situation is slowly but surely coming about.



"It will probably be quite a number of years before every room in a house will be equipped with radio, but many homes have two receivers. Others, while they do not have more than one receiver, do have one or more extra loudspeakers connected with their set.

"The — Company has made provision for these extra loudspeakers not only in connection with its table model receivers, but even in conjunction with its console models employing built-in reproducers. This unusual provision has opened a field of wider usefulness for the radio receiver. One can now get radio reception any place in the house desired, and does not need to be confined to the immediate vicinity of the set."

**Letter in Correspondence Column.**—Dr. J. M. Neil of Oakland has sent a letter to the Council, which is printed in the Correspondence column of this issue. Doctor Neil's discussion of some economic problems should be of interest to members of the California Medical Association.

## CORRESPONDENCE \*

### Subject of Following Letter: Economic Interests of the Medical Profession

Oakland, California,  
December 16, 1929.

The Editors,  
California and Western Medicine:

It is gratifying to see that the California Medical Association is coming to a discussion of the economic problems of its members. For too many years we have made this vital phase of medical life taboo. Undoubtedly the bulk of the profession much prefers to look only at the humanitarian side of practice, but unfortunately, or fortunately, very few are financially able to be philanthropists. It is common sense then that we should have a commercial as well as a scientific organization, and this is a far cry from commercialization of medicine.

We are all cognizant of the dissatisfaction that exists among the laity with present-day medical costs, at the same time we know that a large part of this unrest results from faulty education. For the past few years numerous articles have appeared in lay magazines and newspapers setting forth the excessive costs of medical care. Any newspaper, usually without any consideration of the facts, feels free to tell its readers that the cost is excessive and that good medicine is beyond the pocketbook of the average wage-earner. This little formula has been so well sold to the public that most any patient will tell you that only two classes of society obtain first-class medical care: the very poor and the very rich. We who constitute the rank and file of the profession know that this criticism is unjust.

The same newspaper that promulgates these dogmas does not hesitate for one moment to tell that same wage-earner in large advertisements and accompanying news articles that radios are good values from \$100 to \$500; nor does it hesitate to point out that the set of last year is obsolete and should be traded in at one-twentieth of its previous sale price. How many physicians have ever seen any effort on the part of our sources of general information to give the public any idea of the monetary value of medical service; almost without exception such articles as appear are generalizations, and these decry the mounting costs of present-day medicine. There is no fair comparison, say, between the cost of an up-to-date radio at \$300 and a major operation that saves a patient's life; nor is any effort made to point out the economic value of good health. One of the shortcomings of medical statistics is that it keeps no mor-

bidity tables. Most any text on medicine gives in detail the mortality rates of any specific disease, but one looks in vain for any idea of the percentage of cripples that follow in its wake. It is easy to understand this situation because the physician's prime motive is to preserve life, and this has focused our attention on death. From an economic standpoint, the person who has ceased to exist is no longer an economic entity; but the cripple with 50 per cent efficiency is a vital factor in the human machine. It has been our shortcoming in the past that we have failed to stress such considerations. We have not made the public health-conscious, and in failing to do so we are faced in 1930 with a public having only a monetary standard of values and no corresponding valuations for medical services.

Nor is the public alone in this matter for, because of a scale of prices graduated to the patient's financial ability, each patient becomes for the physician an economic as well as a medical problem. But where is the physician to turn for information that will help him determine the real value of his services to his patient. How is he to know, except by chance conversation with other physicians, what moral support he can reasonably expect from the profession as a whole of any fee he may ask. Truly this is a peculiar state of affairs: under the code of ethics we are expected to be gentlemanly rivals of our brother practitioners, we are asked to conduct ourselves that we cast no reflection on the previous physician the patient employed, but as to the largest factor that the American public uses to gauge the value of anything, the factor of cost in dollars and cents, our present organization leaves us in a quandary. The importance of this lack of coordination in medical economics cannot be overestimated in the production of jealousy within the ranks of the profession; nor can the importance of the concomitant failure on the part of the profession to present a solid front to the public at large be overlooked in any analysis of the present urge for socialized medicine. Our inability to definitely answer for the individual the question of the worth of any medical service immediately puts us in an arbitrary position, the universal psychological response to which is antagonism. If we try to justify our position by explaining to the patient that such is the common practice, we get only pity for ourselves and a transference of the antagonism to the profession as a whole.

The present industrial accident situation is also making for unrest among the public. The fee the physician receives for this class of work is rapidly becoming a basis for comparison, and because it is a concrete monetary standard (again the dollars and cents!) patients in private practice are asking and those not asking are wondering, why it is a doctor can have one set of charges for individuals and another for a corporation. Initially those not doing this class of work felt they could ignore the situation, but we find only too soon that we cannot ignore any practice that puts us on an economically competitive basis with other licensed men. It is a factor making for centralized control of medicine, and soon we will recognize it as such. The answer that the physician is at liberty to show that his services are worth more than the scale, anticipates that he cannot afford the time or the money to prove his point; but even if he did it would not remove the existing psychology.

Other factors are rapidly preparing the public for lay control of medicine. Anyone reading the advertisements of the large insurance companies; anyone listening to the arguments of the insurance agents in behalf of health insurance; anyone thinking about the possibilities and the basic psychology of the periodic health examinations by insurance companies cannot but be struck with the underlying program. The public is gradually being taught to look to these organizations in health matters, and whether or no there is an ultimate intention on the part of these agencies to take over the control of medicine is beside the point that public support is being weaned away from the medical profession. In theory it is all right

\* California and Western Medicine in printing letters in the Correspondence column does so without committing the California Medical Association or the Journal to any issues that are discussed, and prints such communications without prejudice.



for us to maintain that we are not interested in material things; but as a matter of self-preservation we must be interested in power, and in 1929 power is represented by wealth. It is folly for us to even attempt to maintain that we can make scientific progress; each case offers its own peculiar problem and its own opportunity for generalization.

In the December issue of CALIFORNIA AND WESTERN MEDICINE is an article on the achievements of the Rockefeller Institute, all made possible only because of the wealth of that agency. If medicine is to give to coming generations all that it is possible for medicine to give, then it must remain in the hands of the medical men, and not become the tool of some private group. Medicine stands today alone as the one remaining vestige of a government built on individual effort and ideals, but economic coordination is vital if we are to maintain control of our heritage. Each and every time we have conceded to some political group functions that the individual at one time carried out, just so often has medicine lost and the politicians been presented with another source of patronage. Each year the sphere of the private doctor becomes smaller, not because our usefulness for scientific application is less, for we have more to offer now than ever before, but because our economic control of our charity puts the private doctor in the untenable position of being in competition with charitable institutions, with an ever increasing general educational program that justifies the patient in seeking free medical care.

This is not a criticism of our social service agencies, but it is a realization of our lack of appreciation of the public psychology. If there were only one method of entrance of patients into such institutions, that of recommendation of the patient's own physician, we would create in the public a moral obligation to the professions and not a political organization for some political climber who is willing to sell not alone his integrity but our charitable impulse to further his ambitions. I am sure that the statement may be safely made that the man practicing under the present system who has not had public institutions take away patients who are able to meet their obligations were they willing to sacrifice the radio or some other nonessential is the exception; and the man who has not had other patients much better fixed financially, receive care because of political pull has not been in practice very long.

Socialized medicine may come, and if it does come it will be because we have refused to effect an economic organization. If it comes under present existing political conditions it will be a failure, as it has been elsewhere, because no socialized system can function side by side with an economic system founded on the predatory instinct. Medicine faces a crisis, but in that crisis is opportunity, opportunity for socialization of medicine within itself, opportunity for service not alone to the human, but opportunity for service to the body politic. Any program to forestall political control of medicine must be grounded on an economic basis, must put back into the hands of the men most vitally interested in medicine the control of medicine, must be thoroughly socialized within itself, with safeguards to guarantee professional and economic independence.

Yours truly,  
J. M. NEIL, M. D.

**Subject of Following Letter: Federal Laws Regarding Pilot Licenses in Aeronautics**

Department of Commerce  
Aeronautics Branch  
Washington

December 21, 1929.

The Editors,  
California and Western Medicine:

The attached resolutions were passed by the American Medical Association at its stated assembly held at Portland, Oregon, in July, 1929. It is believed that these resolutions are of sufficient interest, in view of

the rapidly increasing number of physicians designated as medical examiners, to warrant publication in your journal.

You may be interested to know that all applicants for federal pilot licenses, either for flying or for training as pilots, must pass physical examinations before physicians designated by the Secretary of Commerce. They must likewise be reexamined periodically. These examinations cover a rather detailed examination of the eyes, a brief examination of the ears, nose and throat, equilibrium, a general physical examination, and a detailed examination of the nervous system. There are now about seven hundred and fifty medical examiners so designated throughout the country. All these examinations are reviewed in Washington, where the applicant is finally certified as qualified or disqualified for the grade for which he has applied.

Very truly yours,

L. H. BAUER, M. D.

Medical Director.

\* \* \*

Whereas, The Aeronautics Branch, Department of Commerce, has organized a medical service for the physical examinations of civil pilots and prospective pilots, in the interests of safety; and

Whereas, The physical standards adopted are in keeping with those adopted universally, and have reduced aircraft accidents from physical causes to a minimum; and

Whereas, The department has required these examinations to be made only by designated physicians in the interest of uniformity and control and in accordance with the custom adopted for the Army and Navy and in other countries; and

Whereas, The selection of examining physicians by the department has been based on training as flight surgeons or its equivalent, or on group examinations by specialists, a high standard of examination has resulted; and

Whereas, The department requires that all examiners hold the degree of Doctor of Medicine, be licensed to practice medicine under the laws of their respective states, and further requires that the appointees be recognized as ethical practitioners in their respective localities, thereby supporting the high standards advocated by this association, be it

Resolved, That the American Medical Association at its stated assembly in 1929 endorses the medical work of the Department of Commerce, its methods of physical examination and its method of selection of medical examiners, and urges that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine; and be it further

Resolved, That a copy of this resolution be sent to the President of the United States, the Secretary of Commerce, and the secretary of each state medical society.

### DESCARTES WAS RIGHT \*

By HARRY M. HALL, M. D.  
Wheeling, W. Va.

*If ever the human race is raised to its highest practicable level intellectually, morally and physically, the science of medicine will perform that service.—RENÉ DESCARTES.*

René Descartes, the French philosopher, was born in 1596 and died in 1650. Copernicus, Vesalius, and Chamberlen, the discoverer of obstetrical forceps, flourished about the same period. The great names of that era were a brilliant galaxy, destined for deathless fame, but it is doubtful if Descartes looked out on an impressive medical profession. It is quite impossi-

\* This is a paper which was read at the annual conference of secretaries and editors of constituent state medical associations held at Chicago, November 15-16, 1929, and printed in the American Medical Association Bulletin.



ble to get at the animadversions of the modern medical mind without awarding a hasty glance at the past. Medicine certainly had moments in its other days reeking with sordid discouragement, shocking oppression and insistent persecution. But like the Jewish race and its Bible, it managed in some way or other—milling, struggling, suffering, triumphing, bleeding, pleading and dying often in martyrdom—to continuously develop the foundation on which it rests today. Its practitioners had to face vulgar, unspeakable quackery; absurd antics of sinister nondescripts; death for asserting the truth; crassness; idolatry; charms; amulets; absurd superstitions. If they succeeded, little reward followed; if they failed, torture and death. They pursued their profession, forced to mingle with toothless hags, itinerant barbers, withered soothsayers and vehement fakers. Had they a passion for anatomy, they must work in a cellar, fearful of detection. Had they a love for the truth and were men of distinction, they must needs face their king—and the axe and the block was the reward for defending the fact that the heart beat and the blood circulated. What courageous men they were! What a fine faith! It should be enough to make us ashamed of our timorous actions, our wavering ideals. We look back casually and commiserate with them. Ah, it is here we make our mistake. Allow for relativity in time and place, natural improvement of all civilization, the intervening years, discoveries, inventions and the like, and it is rather doubtful that we have any room for commiseration.

To take the fearful healer of the day of Descartes and compare him with the opulent doctor of today riding in his automobile to a magnificent hospital seems not only rather grotesque but absurd. Measured in terms of comfort, standardized living and ease of carrying on the medical artfulness, it may be ridiculous. Man does not live by bread alone and, as we shall see, other trials no less disturbing hover over the modern doctor. These very comforts might be said to be the potions that fill the physician of 1930 with a sense of security he does not possess. In 1650 he well knew the trials of the hour. When it comes to certain problems that serve to perplex the medical practitioner of today, concerning his status among his fellow men, making of him either an individual or a member of a herd; endowing him with a certain self-respect or else assigning him as a mere cog in a great paternalism, describing him as a man or something akin to an industrial parasite, it is hard to believe that we are, just now, allowing for natural progress, any better off than we were then. The great determining factor then was to keep one's head on one's shoulders. Today it is to keep one's individuality and self-respect together. One is just as priceless as the other. That is why the Boston Tea Party was organized and, as I take it, why we are here today discussing this subject in the manner we are. We are not here for idle criticism nor for captious carping. We are here to face the facts.

If we speak the truth here, censure concomitantly will follow, but it will be as nothing compared to the realization that we have these adversities with us to write about at all. The path of the essayist who would attempt to find the real causes of medical unrest is not an easy one. Perhaps he may be accused of bitterness; perhaps he may wound his friends; perhaps he may seem almost to bite the hand that has befriended him. That, I think, is why so little real progress has been made. Reluctance and distaste, some fear and not a little terror seize a writer as he meets in the beginning so much that is forbidding. The only comfort one can gather is to include himself at once in all the delinquencies as one who has been laggard with the rest.

Every editor and secretary here has doubtless experienced these sorrows as he has done his best to herald the clouds that appear to him as darkening the horizon of medicine. He has recoiled too with some distress and quite a little discouragement as he has seen the continuous and deliberate disregard with

which it was all met. Let him recall that there are people filled with want and distress who spend their last dollar at the movies in the attempt to have their minds distracted from the misery at hand. They all have hopes that on the morrow a job will appear. Just so there are many doctors running hither and thither up and down the country attending medical conventions, where they listen to well-spun theories as to how the gall bladder is infected, who do so to escape the grave economic and social problems which beset their professional lives at home and which have become so intolerable that they must seek surcease elsewhere in the vain hope they will hear unexpectedly some panacea for their woes. To their surprise every subject and every disease is touched on save this one, which is by far more important in this day and hour than all else. To most of us, trained in scientific methods as we are, revivalistic methods are abhorrent. Yet we would that out of all of our glossy self-confidence and hardened technical perfection, a figure with the great voice of a Napoleon, the compassion of a Lincoln, and the gentle persuasiveness of Jesus Christ might appear to lead us out of our lethargy—our supreme illusion that "all is well."

#### THE JAZZ AGE

What is the cause, if any, of this calloused indifference on the part of so many medical men? Today throughout the country there is a situation which, for want of a better name, I shall call a syndrome. Some of its characteristics are a waning faith in religion with nothing apparent to take its place; synthetic friendliness by way of service clubs; cynical disbelief in ideals as a form of flabby idolatry; substitution of planes and cylindroids for beauty; a gradual elimination of the older idea of the American home; translation of the former conception of love into frank terms of animal passion; complete breakdown of the ancient beliefs as to marriage and making it probationary by way of the divorce court; a denial that there is much in human relationship that is permanent, and that therefore personal contact is more or less a matter of transient importance; living from day to day, forgetting yesterday and thinking not at all of tomorrow until it comes; seizing on what is offered with little or no examination of the probable insidious sources from whence it comes. Synchronized sensation is regarded as more important than a sense of responsibility. Finally, this is a mechanized age, and as machines have no conscience there is no particular necessity for those who operate them to have any either. All this is assembled, so to speak, thrown together and referred to as the "Jazz Age." Into this scene is thrown the modern doctor. We might paraphrase here, the old oft-quoted lines of Pope.

Jazz is a figure of so repellant a mien,  
As oft to be ignored; needs but to be seen.  
But seen too oft, familiar with her face,  
We first pity; then endure; then embrace.

Nearly every tradition of the physician is opposed to the syndrome of which I have spoken. He is by nature and education set against the credo of the senses. His calling directly involves ideals, faith, hope and responsibility. He has carried on a certain belief of Hippocrates, who antedated Christ and whose oath slipped by the low estate of doctors in the days of Descartes and has come down more or less triumphant until yesterday serving physicians as their rules of ethical conduct. The profession of medicine by means of its ethics, imperfect and openly violated as they are, has built up a science and art as orderly as the progressive and complete one of nature in causing the chromosomes to flower into a human being. Suddenly, the syndrome appears, making its impress on all contemporary life. Old rules no longer hold in many things. The staid medical man finds life about him jumping over the stroma like a lot of cancerous cells, and development and progress a matter of carcinomatous revelry. The portraits of a Rembrandt are replaced by silly daubs that resembled



those you made on scratch books at school. Music of the immortals is transposed into nonsensical theme songs that savor of idiocy.

What has the medical man to do with a Jazz Age? He cannot ignore it any more than the doctor of 1650 could shut the door in the face of a royal order. Some there are who will hide in the cellar or die before they acknowledge its presence. But for most of us, there it is. To many, the Jazz Age applies to a wild dancing, singing, night club existence. The syndrome I have related has no such connection. It applies to the life we all are living. So the syndrome has worked its way into the conduct of many a medical man, to the end that it has quite upset his outlook.

The best example I can give is that of the brilliant and well educated opportunist who has multiplied many times in our midst the last few years. A quick survey of him is as follows. He says he must take any good contract if offered, regardless. He will affiliate with the schemes of a merchant prince if it gives him a little brief authority and, if necessary, give the kiss of Judas to his profession. Flippantly, he remarks that the oath of Hippocrates has gone the way of corsets and that every man of premerit splits fees as a necessity and that ethics, the golden rule, and the idea of fair play are like Jupiter, Venus, Tannhauser, and the Valkyries—worn-out myths; that the idea of a gentleman's agreement is like hell—spoken of but not believed in; that none of these ever got you a seat in the subway, a following of politicians, a lucrative position, or any worthwhile rewards. He feels the officers of his medical societies "play him for a sucker" to use the classic words of Texas Guinan, so why heed them? He attends a medical meeting now and then on the way to some other engagement, but as he is practicing surgery because internal medicine does not pay well, he will walk out immediately unless a surgical topic is being discussed. To do him justice, he is clever, brilliant, well educated, and dexterous, and he carries through his operative work with a certain rather elegant poise, arrogant assumption, and superb finish. His cures are not spurious and are exceptionally definite. From month to month and by way of carefully planned advertising, he gains a great reputation and rides the crest of the wave. He becomes an Al Jolson in surgery. Bye and bye personality is substituted for science in his attitude toward his patients. He comes to believe it is solely on his own merits and not by way of any medical organization that he has reached where he is, so he assumes a tolerant air to all that pertains to medical solidarity. What does he need with anything outside of himself? He takes on any contract, gives testimonials for any product, commits any breach of etiquette, ridicules any of his contemporaries, and in a good-natured way says, "Well, what are you going to do about it? My clientele won't let you do very much." He has become the superman. He proudly states he is "hard-boiled" to all that medical ethics business and has come to where he is, despite it, because he gave people the kind of medical service they wanted. I shall not go into how this gentleman has paid except to say that he is hard and brittle.

I fancy you all recognize this type. He is in almost every town and city. You must always acknowledge that his work is good unless he becomes too intoxicated with himself and becomes careless. Doubtless he is superb, brilliant, a credit to the science he is following. In social life, he is known as a "corking good fellow." All he lacks is the spirit that Descartes indicated would make us the saviors of humanity. And just because he lacks it and it is so all important, I believe this type of man is directly responsible for a lot that besets us. I in no sense begrudge him his success. Such a man could have been equally successful by living according to rules and the ethics of his profession. It is the bad example he sets to others that I object to. A colleague battling along, trying to observe the finer graces, and keeping his

obligations to his contemporaries, faced with such illuminated competition, is not likely to adhere to the perhaps slower method. He debates on going and doing likewise, and he usually does. So the idea has spread until it is now a well recognized and prosperous schism. Interns in the hospitals compare the quick results obtained by the visiting men who affect such views, and it can be easily seen which road they ultimately take. So I reiterate that this ever increasing type of man is the instigator of a great deal of the present situation.

#### THE CROWD

Years ago, Gustave Le Bon wrote a small classic called "The Crowd," a study of the popular mind, in which he held that a crowd cannot be compared to the individuals that make it possible; that the mean average is probably of little value, as the new character of a crowd takes on new features and the new average is below that of the mean. One learns from Le Bon that a wide chasm may separate a great surgeon from an orderly and yet, as to character, the more lowly one may be the better of the two; that men seem to take to the primitive in the mass; and that crowds may be composed of units spread out over a wide territory held together by a common emotion. All this helps in trying to understand medical assemblages. Doctors in their home environment may be individually men of great judgment and keen to see the dangers of the future. When brought together in the mass, however, they seem to take on rather childlike qualities as may be seen by their restlessness, tendencies to run in and out, irritation over some mechanical error, and above all their opposition to an address pointing out to them the weaknesses in their nonprofessional outlook. Under the spell of a celebrated speaker or a well known personage, I can think of no audience more quickly led than that of a group of medical men. This was illustrated the other day at Detroit when the powers of the Interstate Postgraduate Assembly conferred on Henry Ford the honorary title of Doctor before an audience of nearly five thousand physicians. The crowd went wild and clapped its hands and shouted in childish enthusiasm. Mr. Ford stood smiling amidst a number of celebrated medical men while Doctor Deaver, his picturesque personality all aglow, delivered the bestowal address. The industrialist said not a word, but bowed and retired from the scene, as a mighty roar of approval followed. This idea is covered in Gustave Le Bon's book. Had any member, prominent or obscure, of that august gathering arisen and told this shouting crowd that they were about to award a great honor to one who had lately criticized their whole profession rather harshly in a series of syndicated articles, written on decidedly slender knowledge, and that in Detroit he had built a hospital to controvert directly the medical profession's idea of how a hospital should be run and that in the medical fraternity in his city there was more than one doctor who felt decidedly hostile to his attitude—that member would have been summarily dealt with.

Mr. Ford is a great inventor who made a good car that has carried many a doctor efficiently to his destination. I doubt if Mr. Ford ever constructed his car as a benevolent gesture. But I should like to ask if Behring would not have been a millionaire if he had patented diphtheria serum? Would not Roentgen have been more of a Croesus than Ford if he had received \$20 on all x-ray outfits and a royalty on the plates? Where would the man be who invented the vaginal speculum if he had patented it? What about Banting and a cent on every unit of insulin? Any one of these men could be where Ford is if he had said he chose to run that way. Always we overlook our own great discoverers.

It may be that we are rewarded in heaven for turning the right cheek when the left has been slapped, but to me the performance in the Ford case is merely an instance of playing the sycophant and has no merit. This brings me up to why we, as a profession,



are so prone to do this. Let us once more go back to the past. I have reminded you of our precarious situation in the times of Descartes. Hippocrates and Galen may have been veritable mountain peaks in history, but the dark succeeding periods saw us consorting with barbers on about an equal footing. Always, however, we had to depend on royalty or the rich and powerful for any advancement. In savage tribes, even the medicine man has to seek the favor of his chief. Always, as no other men have had to do, we have dealt with death. Since time began death is by far the greatest tragedy, and always the fighting of death has been our vocation. The demise of a king or the exodus of a rich man has no elements of triviality about it to the populace. When death occurs, the doctor's, whether deserving of it or not, has been the only tangible head on which blame could be lowered. Oftentimes, in many scenes the medical adviser has paid with his life. Doctors, like women, in the past had to learn to be subtle, shrewd, and in the end something of the sycophant in order to carry on. We have never really gotten over it. It has become a sort of hereditary matter which we feel, as men in general hate the reptiles, because their antecedents, the apes, feared the serpents. In the dim distant past, if we moved too rapidly, some ignorant yet powerful segment of the population saw to it we were halted and punished, so we learned to respect and fear authority, power and money. It is true the doctor along with the court fool rose to positions of great power. But then the day came when the doctor told the king he had a four plus Wassermann reaction in terms of the *grand mal*. The jester joked about it. The next day saw them both on the way to the guillotine.

If we have the courage to brush subterfuge aside and look at things squarely as they are, we will see we are exactly in the same position today, allowing only that humanity has sickened of the scaffold. There are two ways of being afraid of power and authority. The old way was fear of your life. The new way is fear for your position and self-respect and, in some places, your livelihood. None of us can be said to live in any abject terror of anything perhaps, but close analysis will reveal almost all medical men exist with some sword of Damocles over them. I believe every medical man should acquire all of this world's goods he can. None of them will ever acquire a vast sum at his profession alone. It cannot be done. I could scarcely do other than wish to every other man the attainment of all the great wealth he can honestly assemble. The great evil is that when some men acquire great wealth they feel it incumbent on them to try to direct and to influence great forces and organizations which essentially lie quite outside and beyond their knowledge, and certainly outside any such offices to control. Especially is this pernicious when it is extended into some technical or scientific realm where the disturbing factor cannot possibly have the necessary intelligence or education to comprehend peculiar and highly specialized responsibilities which have been slowly acquired through the ages and at the high cost of experience and study. To do so strikes me as utterly indefensible, wholly uncalled for, gratuitously insulting and designed ultimately to interfere with the orderly and natural progress of the given scientific activity and to contribute greatly to a destruction of its morale. Men are either leaders or are among the led. There are not many leaders. The medical profession especially has a penchant for the abject worship of great names and leaders. Now wealth and power have developed many master minds, and in industry they are allowed to become well-nigh invincible.

#### INDUSTRY AND WEALTH VS. MEDICINE

Life, it seems, has settled down into a strenuous contest between large groups, pretentious mergers, great communities and power in the mass. Industry and wealth has seen fit to pit its master minds against those of medicine. It is like a duel between two courageous men where one is a skilled swordsman and the other has nothing save his valor. In many instances

medicine has come out with nothing left but its life. So we mostly stand aside when a battle is imminent. The country doctor feels the authority of the small town banker. The general practitioner in the city is glad to join the Rotary Club. The specialist endeavors to placate the merchant to keep him from seeking advice in the metropolis. The great surgeon who should have no peer, boasts his trivial confidences with well known men of power. The head of a great group or clinic makes peasant-like obeisance in the hope of getting the millionaire to make an endowment that shall see his plant end in a big foundation. The instances could be multiplied. Medicine never had any real reason to bow to anybody. It never has, scientifically and as an art. We have carried the complex, hidden mysteries of a forbidding, tragic misdirection of evolution (if such it actually is) to as great a height as human experience could warrant. We can never be assailed for not making ten more talents out of the ten that were given us. Where we erred, from the beginning on, was in not realizing if we were to fulfill our destiny that there is more to medicine than just medicine. To have come to our fullest efficiency we should have conceived that there was a side to us that was in no sense medical. The steel corporation is not in any manner devoted entirely to the fabrication of steel. Utilities are not concerned wholly with the making of light and power. Coal companies are more than just developers of coal. They have other things to consider, one of which is medical attention to their employees. Their best minds are centered on organization, expansion and executive work for their enlargement and making them more or less impregnable—in short, monopolies.

We went along confining ourselves to one thing—curing disease. We had an organization—nay many of them—but they too were ordered to think of nothing outside of healing disease and increasing research. In an ideal world this would no doubt be the better way. But it is not an ideal world and human nature is what it is. Business and industry suddenly discovered it needed medicine. Heretofore it had paid little attention to it, regarding it as a personal matter. They saw health as the very keystone of the arch of all existence. No canal could be built where yellow fever raged, no steel mill was efficient when an epidemic kept half the men at home. Injured men were a big liability. People could not buy if harassed by illness. A king was not a king with a pleuritic effusion. No prospecting expedition could go forth without a medical adviser. A captain of industry was useless if agonized with a kidney stone. Great wealth and business found it had one enemy which was heedless of its power. They could not control it. So they set about to control the agency that came nearest to controlling disease—that was medicine. They had found the law receptive and the ministry weak. So industry met medicine on the highway of humanity, and the outcome does not need recital. Hospitals, medical colleges, research laboratories are today controlled not by medical men, but by trustees and boards of wealthy laymen. By way of contracts, supervision is had over the manner of administration that hundreds of doctors perform. I could go on giving many more instances, but the time at my disposal forbids. The present gesture is that men of vast wealth shall spend their declining years pointing out to us our delinquencies, lecturing us on our frailties and essaying to make us over to their heart's desire.

They speak to us of philanthropy—we that can be almost said to have invented it. They prate to us of social uplift. The only practical uplift today is by way of medicine. Our coöperation alone has made all social work possible. So far other uplift work has been more or less of a failure. No scheme to reform criminals is effective, for crime is on the increase. No missionary work in foreign countries has made much progress for religion except in the places where hospitals have been included. The hospitals alone have



made the natives better off and have been successful. Half the prestige our country bears in other climes is through the hospitals we have bestowed on them.

Henry Ford and Julius Rosenwald and many others may hold us up to scorn because commerce and invention—not highly original occupations—have seemed to pick them out as oracles. Yet both would resent being told by prominent medical men that the one had made several bungling engineering feats he had to do over and once on the witness stand had to deny knowledge of articles that practically bore his name, whereas the other has economically driven untold small town merchants out of business apparently without any thought of what was going to become of them. It seems to me that some large institution should be provided for these men having no occupation—business care at a lower cost—giving some idea of what they were to do next might be a fine piece of benevolence.

I regret to take up so much time with this sort of observation, but it seems to me that it is all done for a purpose—not as whimsical criticism or as mere talk, but as something in the nature of a threat. For hospitals and institutions are built which are placed in competition with those we happen to frequent, in order to bring us to terms. We are told in so many words, either to begin to think in their terms or we will be forced to do it. That we have lost control of the agencies through which we accomplish what we do is largely our own fault. Had we stepped in and included executive, organizing, economic features into our calling as the great industries have appropriated medicine into theirs, we would now be perhaps the most powerful single group on the face of the earth. We hesitated; when we did come to adopt them in part it was too late. Had we singled out highly capable men from our ranks, picking them out as does Standard Oil for their proficiencies and then set them in the high places to do their utmost to make us the greatest human instrument for good the world affords, we would today be realizing to the fullest the prophecy of Descartes. We would control health—therefore everything. They might call us a monopoly and a trust. I wish they could speak the truth when they said it. The burden of our song is that we are not. Our loose business methods, our promiscuous giving away of our services, our failure to effect complete solidarity, our lack of vested authority at the top has lost us the control of the places we work in, some of the selection of conditions under which we heal, and a great deal of prestige. We still control some of our future, and one of the reasons why we are here today is to talk over conserving what we still possess. We all think, I feel sure, that we can render just as good service to business outside of its control as under it. We cannot be classed in as skilled labor and dictated to as artisans are proscribed and then be expected to make the new discoveries and progress that is our heritage. We are not that kind of men, and most of us will never be. The hidden reserve of accumulated experience that is in us all needs special handling to do its best, and any attempt to dominate it as so much potential motion to be handled at will must end in disaster to all concerned.

The question arises, "Is it too late to go back to complete control?" It probably is too late. But the only way to find out is to investigate and see. There are no instruments of precision in such a case. There is a lot of buried, latent fight in every doctor—even in those who are under contract. Constant waging of war against disease puts some combativeness in every medical man. Physicians and surgeons are as universally intelligent to a certain degree as any other group of men in the world today. According to Gustave Le Bon, all they need is a common emotion to make them into one big mass which might be bent on a primitive lynching of a negro, or on a grand and noble accomplishment like saving the honor and dignity of the medical profession. Let every doctor then have the possible outcome brought home to him—and the possible outcome is always to be considered as

state medicine. Let us weld ourselves into a big corporation, with a head after the fashion of Mussolini but without his defects, heedless of those who cry that the people will not tolerate it. That the people are against us is somewhat of a fiction. They care not so long as we give the service. Explain to no one, realizing that explaining is a weakness if carried too far and recalling the old statement that our enemies will not believe in us whatever we do, while our friends need no explanation. There are many of us who are in for placing our heads in the yoke and accepting the whole thing as economically evolutionary. These men argue that the laymen run the hospitals better than we do. They would accept \$500 under contract rather than a probable \$1000 they would not get. We shall never realize the prediction of Descartes by so doing, and it should be our aim to fulfill that destiny.

A few men control industry, so a few men will eventually control medicine if we meekly submit. It is scarcely likely without an upheaval that these few men would ever try to be despotic, but one of them could easily launch on a sea of propaganda against us with very distressing results. With a fancy that he had been cured by a faker or an irregular of some kind, he might feel we ought to include the system in our own. Refusal might mean displeasure, and from such small acorns mighty oaks do grow. It is therefore the better way for humanity in general that we keep the supervision of our own affairs.

To illustrate, in West Virginia contract practice is quite common, running in localities from 25 to 50 per cent. I offer no criticism of the corporations. They are out to obtain everything as cheaply as possible. The fault if any is that the organization of doctors in the state should have prevented it if they could and felt that it was dangerous. But they did not, so the responsibility is entirely on the doctors themselves. It seems apparent that part of the medical profession in West Virginia approves of contract practice, and it is probable that this is a fact. Its effect on the general profession has not been thought to be very important. Good salaries were originally offered and no doubt accepted with alacrity by the great and the near great. Opportunity awaited and was swallowed as a fish accepts its bait. This did not matter so long as contract surgeons were in the minority, but when it reached a strong minority something happened. I feel that the same drama is being enacted in some fashion in every other state. As West Virginia is largely an industrial state, it happened to be more easily observed. The corporations felt that they could now handle matters with more decision. The inevitable happened. When a steel corporation or a coal company falls below their dividend requirements, as they see them, retrenchment speedily follows. Wages of the workers are cut and if not accepted a strike or quitting are the only recourses. The contract doctor did not count on this to any extent. He simply felt he would not be included. I shall give three examples to show that he was mistaken. A young intern, on completing his service, found himself comfortably placed in the employ of a coal company at a check-off salary of \$900 a month. Not so bad for a fledgling! Some time later he was visited by an official of the company who promptly told him he could accept a cut of \$600 a month or quit. He was assured a candidate for his place could immediately be secured for \$300. Another older physician who had served some years received, if I recall correctly, \$1.25 as a check-off for each married employee and \$1 for each single one. He was told business was not so good and he accepted \$1 and \$0.75. In both cases he received fees in addition under the Workman's Compensation Act. He was next informed he must accept \$0.90 and \$0.60, give the company the fees or resign. They informed him they could easily get a substitute. A third company secured a so-called medical director. He was instructed to tell all the medical attendants to accept



\$250 a month or resign. They could easily replace them.

If all this differs in any way from strike-breaking, I cannot see it. Contract practice, as I said, is held to be by many as impossible of correction. Many believe it is an evolutionary matter, purely economical, and that it is the only solution of a difficult question. They argue that this is a machine age, and a machine knows neither freedom nor liberty. No less a person than Mussolini says both liberty and freedom are, in the last analysis, pernicious; that a republic is absurd and a democracy farcical and that they will not live because, in the main, people do not know how to accept them, being made to be led. Contract, group, community practice and state medicine all follow this principle in that they mean subservience of the several to a head or heads, who must necessarily assume some autocratic power. Of course, any doctor can quit at any time, but where will he go?

If, then, this idea of Mussolini is right—which is to say democracy is a failure—let us scrap all our ideals of the past, admit they are wrong, resign ourselves to the order of things and make the best of it. But if we do not agree with it, let us start a campaign of medical education with more force than any of the past attempts, assuring even the contract men that the next step the corporations will take is to shed their responsibility for medical care over on to the taxpayers and then, to be sure, we will have state medicine.

Some of our more celebrated colleagues who have reached places of safety at the head of something or other or who have amassed a fortune, usually by some route extraneous to medicine, shake their heads rather mournfully and say we are headed for state medicine. And, of course, we will be if we listen to them or follow their gloomy forebodings. If you believe literally that the meek shall inherit the earth, then the only consistent thing to do is to kneel down like the lamb to the slaughter. If you believe with Roosevelt that "Aggressive fighting for the Right is the noblest sport the world affords," there never will be state medicine.

#### CONSIDERATION OF HIGH COST OF MEDICAL CARE

Because we deal with people only in times of stress and trouble—in other words, while they are ill—our sympathies are appealed to and we have been tricked into many false positions. The giving away of our services was one of them. The analysis cannot here be given, but it can be shown that the responsibility for the care of the indigent is a responsibility of the remainder of humanity, and if we ever had any part in the matter, it is only our fractional part as a section of the population. But we have always had it all. By translating our services in the past into some heavenly abstract administrations, we steadily protested against the idea that medicine was a high-class scientific commodity to be sold as is law, engineering, education and every other human endeavor, and we made a mistake. We have had to reverse ourselves and come to that view anyway, and in doing so the public has been slow to understand us and we have been dubbed as "getting commercial." Our education was commercial. Our instruments and paraphernalia are commercial. All that we buy is commercial. Whatever we come in contact with is commercial. Why should we not long ago have come to the realization that we had "an opinion and its placing into practical application" to sell and act accordingly? The clergy have sold their "birth and death services" since time immemorial; no one thought the worse of them. It is true they will donate them at times, but there are exceptions where almost everything is found to be given away. Had we always charged for our services and had no systematized free services, no one would have ever heard of reducing the cost of medical care, for a way would have been found to have the poor's ministrations paid for by funds which would have also compensated the doctor.

The average cost of a bed in hospitals ranges from \$4 to \$6 a day. Those unable to pay at all make this rate as high as it is. Who is it responsible for the poor? Certainly not the doctors. The medical profession had nothing to do with their poverty. It is the economics and chaotic living conditions of the outside world. But you will find the doctor has to answer for them when ill as if he were responsible for them. They cannot obtain a livelihood, so are not sheltered, fed or clothed. They, therefore, through lack of resistance fall a prey to disease. No contractor gave them a house. No chain store gave them food. No mail-order house gave them clothing. No automobile dealer gave them an old car to obtain a little fresh air. No statesman worked out a solution for their maintenance with self-respect. No politician gave their plight a real thought. Mergers, combines, and chain stores threw some of them out of employment. It was too late to get anything else. Flotsam and jetsam. What will be done with them? Shoulder them on a hospital and let the doctors do what they can, but how? Free, of course. Up go hospital rates. Then critics dispose of us in sarcastic terms about the high cost of medical care. We think we have no part at all in the high cost of medical care. The outside world is responsible socially for the predicament of the poor. Particularly are the legislative bodies and the systems of commerce responsible. We need no elaborate figures or investigations or surveys to tell us that few doctors receive handsome incomes from their vocation. Outstanding surgeons possessed of great skill in some particular line may make big fees. The others do not, and there are men in the United States survey who know this even better than we do. Had we collected our accounts and had no promiscuous free service no one would have heard of the high cost of medical care. Our philanthropy was really the cause of our undoing.

(To be continued in March issue.)

## SERIO-LIGHTER VEIN

### "BITER BIT"

Close-up of a Doctor on—Not at—the Table

By WILLIAM H. BRADDOCK, M. D.

Jarbridge, Nevada

"Now, you'll feel this prick, and after that you'll feel nothing."

Uh-huh. I've used that formula myself, and always had a doubt of it, unless one was meticulous about keeping the needle within the infiltrated area. There, I thought so. Every single sting is perceptible. Poor technique, to tell—ah, misstatements, to the victim. He wonders—like me, right now—if the surgeon knows his business, after all.

That must be the knife—ouch! "Feel that, old man?" A dull jab, then the knife again; skin, superficial fascia, superficial layer of deep fascia—yes, the assistant is pulling something, retracting the muscle, doubtless. Quick work. It hasn't hurt particularly, so far, but it's kind of a general strain; hope he won't be long—would hate to have my nerve give way.

"Now, this may hurt a trifle."

"Go ahead. What is it?"

"Outer layer of the muscle fascia."

Humph! Hasn't begun yet. Why the hell is he so slow about it? Nerve's liable to wear out if he takes too long. Wish a fellow could watch this; could be worked, with a large mirror, and leaving the eyes uncovered. Still, one feels drowsy, and a little dissociated after that morph; just as well lie quiet, and suck that iced gauze that the nurse, or anesthetist, or whatever she is, wipes on the lips. Mighty refreshing. Ugh! That'll be the muscle sheath. Feel nothing more, huh? Wish he'd hurry—would hate to break down and snivel—'Tisn't the pain, exactly, for it doesn't hurt much; must be the suspense, and



the cold-bloodedness of it all, waiting for him to hurt you.

That's the real muscle retraction, no mistaking it. Deep layer and peritoneum next, but first, of course, he'll fiddle around, tying off and so forth. Ouch! That one hurt, whatever it was.

Funny how I'm feeling now. No particular pain, but every last fiber of me seems aware that something unusual and alarming is happening to me, and is more than a little worried about it—

"Do you know where I am now?"

"Nope, lost track altogether." He must be in the belly somewhere, but you can't prove it by me. There are no particular conscious sensations, except that they are working somewhere in my appendical area, but I'm tense all over. Not the muscles; they seem relaxed enough. It's a sort of general somatic anxiety, about something desperate and dangerous going on inside me; something like a building with all the burglar and fire alarms going full tilt, all through it, but the bells ringing silently. It's hard to explain; consciously, I know what is going on, in a general sort of way, and also I am aware that my unconsciousness, or subconscientness, is full of feelings, which are probably unpleasant. Hope they don't burst through into my consciousness; would hate to have my nerve give out and disgrace me.

"Now just a moment. I want to see exactly how things lie in here."

Oh, damn his scientific soul! "Take your time; I'm all right." Try to be a good guinea-pig, since I must be one. Ugh, he must be pestivating around inside, dragging on things. No pain, but that general sensation of nervous discharges throughout the body is getting stronger and stronger; if it were electricity, I'd prickle all over.

Ow, that hurt! In the umbilicus. Felt exactly as if he were hauling on the falciform ligament, trying to drag my navel into the belly by its roots. But the falciform ligament goes to the liver somewhere doesn't it? There's some hurting in the general appendical region, too.

"Having an attack now?"

"Absolutely—and it hurts." An attack is just exactly what it is, and it would be eased a lot if I could only pass the gas.

"Well, I guess our diagnosis was right."

Oh, damn your diagnosis, and you too! Get along, man, and get done! My nerve is going to give out in a minute—

"If you'd just give me—a little—rest." Hell, if I can't talk straight, better shut up!

"Sure, we'll give you a rest."

Gosh, ain't it a grand and a glorious feeling! Just about here is where that fellow who tried to take out his own appendix must have had to quit. Have a notion I could have gotten down through the peritoneum, if I'd had to, but no further. Think of the technical difficulties of locating the thing, lying on your back like this; especially if it were buried somewhere. There they go again, hauling on the mesentery or something—it hurts! Don't believe anybody could haul on his own like that—hurts too much—leastways, I couldn't—it's hurting more and more, real sensible pain, and I don't believe I can stand much more—

"Ugrrh-rrh!" There, damn it, I knew my nerve would go! I'm feeling queer—sort of floating—things getting distant—this must be what shock feels like, a sort of refuge from too much pain. But my nerve isn't going to give out, thank God, for now I know that I know how to faint, if need be. They're still pulling on that mesentery, but not so hard, and it doesn't seem to be hurting so much; the purse-string, perhaps? Dick said he thought they had dropped the cautery into his belly, when they divided the appendix, and cauterized the stump; nothing like that, so far—though it wouldn't matter now—

Things seem to refocus themselves, rather suddenly. I don't believe I fainted, but I wasn't far from it; just began to, perhaps.

"Now I'm going to sew up the peritoncum. The anatomists say there are no pain nerves in it. How about that?"

"They—ugh—lie!" Let the damn fool laugh! Visceral, perhaps not, but parietal—ugh—it hurts! Unless he's fooling me about where he is?

"Now we'll take the superficial layer of the muscle sheath. It's supposed to have nerves."

It has, too. I feel every prick on both sides of the infiltrated area. If that area were wider—but, pshaw, a fellow can stand this easily. Ugh, that one hurt! "What was that?"

"The muscle-tie."

Good, he's nearly through. Skin next. Yes, every prick hurts; and then he has to fool with the skin edges—hope he gets 'em right; I was always fussy about 'em. Now the dressings—

"Say, would you mind letting me see the thing?" Someone brings around a little bottle; the thing is in it, but the eyes won't focus right, somehow; best slide back, and let the morph take hold now—it's rather like a dream, till we get back into bed, and relax into a doze—

## "AS OTHERS SEE US"

### CHESTER ROWELL'S COMMENT \*

The Los Angeles *Times* takes Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, to task for "arrogant intolerance" in claiming a monopoly of "one limited school" of medicine, and for "branding all indiscriminately as quacks, faddists, fakers, and impostors who do not subscribe to his narrow views of what constitutes the practice of healing." "Medical diagnosis under the canons of the regular school is not such an exact science as to call for sneering reference to the substitution of the violet rays of the sun for the old-time allopathic drug doping in the treatment of tuberculosis."

\* \* \*

Since there is not, and never was, any such thing as "old-time allopathic drug doping in the treatment of tuberculosis," and since Doctor Fishbein made no "sneering reference" to the use of sunlight in its treatment, but, on the contrary, uses that treatment himself, as do all other scientific physicians, the illustration is, to say the least, unfortunate.

\* \* \*

But the appeal for "tolerance," by one "school" of another, is an example of a common fallacy. There is no "tolerance" of astrology by astronomers. There is no "tolerance" of fortune-telling by psychologists, nor of perpetual motion inventors by physicists. Geologists do not locate oil or water by dowsing with a forked stick, nor "tolerate" those who do. Entomologists do not "tolerate" those who would exterminate insect pests by interfering with their spontaneous generation. Scientific agriculture does not "tolerate" the theory that potatoes grow wrong unless planted in the dark of the moon. All these "schools" exist, and they are all rejected outright as unscientific superstitions by every scientist in the world.

\* \* \*

On the other hand, good Catholics tolerate the Holy Rollers, and Buddhists tolerate the Mormons. Atheists tolerate the faith of Christians and Christians the unfaith of atheists. Protestants and Christian Scientists tolerate each other's religion, each respecting the right of the other to seek God in his own way. But the law of the land did not tolerate polygamy, when the Mormons said it was religion, and the regents of the University of California do not permit

\* This article appeared in the opening column of the second section of the San Francisco Chronicle of Saturday, January 18, 1930. See second editorial, this issue.



an antivaccinationist student to endanger the health of other students, even though he calls his objection religious.

\* \* \*

So in medicine. If it were a matter of faith, dogma or canons, one "school" should "tolerate" another. If it is a matter of science, then the only distinction is that of scientific and unscientific. And between science and nonscience there is no equality of right, and no basis for tolerance. The fact that millions of devout people in India believe in casting their horoscopes by the stars does not erect them into a "school" of astronomy, nor impose on astronomy any obligation to recognize them. They are neither "regular" nor "irregular" astronomers—they are not astronomers at all. Neither is any unscientific theory or practice of healing any part of the science of medicine. There are only two sorts of medicine, scientific and unscientific. And of the unscientific "schools," science has only this to say—that they are unscientific.

\* \* \*

How, then, shall we distinguish which principles and practices of healing are scientific, and which are not? The simplest test is that which we unhesitatingly apply in every other branch of knowledge. That is the judgment of scientists. If the scientists say that a certain thing is scientific, we accept it as such. If they all say it is unscientific, we say likewise, at least until it has succeeded in convincing them. Every scientific university in the world teaches astronomy, and not one teaches astrology. All of them teach chemistry and not one teaches alchemy. Every university in the world teaches scientific medicine, and not one of them—not a single one in the whole world—teaches or recognizes any of the "schools" or sects for which the *Times* speaks. If the unanimous voice of science means anything, this is its verdict.

\* \* \*

The next test, and the decisive one, is that of method. Scientists may be mistaken, sometimes, in their results and conclusions. Sometimes a thing which seems true in the light of incomplete information becomes only partly true in the light of later discoveries. But science is not mistaken in its method. That method is systematic observation and experiment, and the submission of these observations and experiments to the scientists of the world, for them to repeat, to test and to scrutinize. Whatever pursues that method and is approved by that test is scientific—including, in medicine, light rays for tuberculosis, diet for many ailments, and hydrotherapy for certain mental conditions. Whatever does not proceed by that method, or fails by that test, is unscientific—including all the cults, sects, and schools which Doctor Fishbein rejects and the *Times* defends.

## TWENTY-FIVE YEARS AGO\*

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. III, No. 2, February 1905

*From some editorial notes:*

... *The Meeting at Riverside.*—The next annual meeting of the state society will be held on April 18, 19 and 20, at the New Glenwood Hotel, Riverside. . . .

... *Some Bad Legislation.*—Two particularly objectionable bills have been introduced, one in the Senate and the other in the Assembly. . . .

... Don't lose an hour's time in writing to the Senator and Assemblyman from your district, and get every voter you can to do the same thing; tell them to leave these two laws alone—the vaccination law and the Medical Practice Act. If these two bills

\* This column aims to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

are allowed to become laws, the scourge of smallpox and the pestilence of the quack will soon be California's portion. . . .

*From an article on "The Tonsils as Portals of Infection" by M. W. Fredrick, M. D., San Francisco:*

Although it is scarcely fifteen years since Gabbi called attention to the frequent association of tonsillitis and pneumonia, the importance of the part played by the tonsils as portals of infection for diseases in distant parts of the body is so great, and the idea such a plausible one, that the subject speedily gained recognition, and has been ably expounded in its different phases by a number of good writers and observers. . . .

*From an article entitled "Report of Cases Simulating Grave Mastoiditis" by Fred Baker, M. D., San Diego:*

Strange or rare conditions involving difficulties of diagnosis in diseases which endanger life or the integrity of important function are always worth reporting. The following case fulfills these conditions, while the succeeding cases, though less interesting and important, illustrate another phase of the same disease: . . .

*From an article on "Posture in the Treatment of Disease" by C. M. Cooper, M. B.:*

The influence of disease upon attitude and position in obedience to the principles enunciated particularly by Hilton has been studied to some extent; though even in this there is still much that could be added to our knowledge if to the improved armamentarium of our day could be added the discerning bedside acumen of the older clinicians. . . .

*From minutes of county medical societies:*

... *Los Angeles County.*—The resolutions passed by the Council and officers of the state society, in conference, relating to the question of advertising in the *Journal of the American Medical Association*, were then read by the secretary and, after some little discussion, endorsed with but one dissenting vote. . . .

... *San Mateo County.*—In response to an invitation sent out by the secretary of the state society a number of physicians of San Mateo County met at the Union Hotel in San Mateo on the evening of December 22, and effected organization of the San Mateo County Medical Society. . . .

*From the minutes of the California Academy of Medicine:*

Regular meeting held in San Francisco, December 27, 1904, the president, Dr. Dudley Tait, being in the chair. . . .

... "An Epidemic of Diphtheria at Stanford University." Dr. R. L. Wilbur reported his personal experience in the recent small epidemic of diphtheria at Stanford University and Palo Alto. The origin of the epidemic could not be definitely traced. Of the forty-three cases which came under his observation, in four the infection involved the larynx, in three the mouth, in one the nose, and in one the conjunctiva. . . .

*From a reprint of an editorial:*

*New Jersey's Approval.*—Doctor Jones, editor of the *California State Journal of Medicine*, instead of receiving the support and encouragement (in regard to advertising of secret remedies in medical journals), which his manly and unselfish course deserves, seems to get abuse from some, misrepresentation from others, and the cold shoulder from all. . . .

... One would think that no medical man, except Doctor Jones, was ever born with a sense of humor; otherwise, rich and powerful medical societies would not make themselves ridiculous and stultify themselves for gain. . . .

... What folly! What hypocrisy! Like the Pharisees of old, they make tithe of mint and cummin and neglect the weightier matters of the law.—*Journal of the Medical Society of New Jersey.*



DEPARTMENT OF PUBLIC  
HEALTH

By W. M. DICKIE, *Director*

**Epidemic Meningitis Bears Watching.**—Nineteen cases of epidemic meningitis were reported in California last week; in fact, the present trend of meningitis is similar to the trend of the disease during November and December of 1928. The past year has brought more cases and more deaths from epidemic meningitis than any year in the history of California. From January to August, inclusive, 1929, 302 deaths from epidemic meningitis have been recorded in this state. Thirty-two per cent of these deaths, 118, were among Filipinos, Mexicans, Chinese, and Japanese. Of these, 57 were in Filipinos, 39 in Mexicans, 16 in Chinese, and 6 in Japanese. Two hundred eighteen deaths were in men and eighty-four in women. The numbers of deaths by months of occurrence were as follows:

January .....	43
February .....	36
March .....	55
April .....	47
May .....	51
June .....	35
July .....	19
August .....	16

It will be noted that the status of meningitis at the present time is similar to the status of the disease at the same time last year. Health officers are urged to be on the watch for cases that may be suspicious of this disease and to report promptly to the State Department of Public Health any such cases that may occur.

**Winter Season Brings Influenza and Measles.**—From the reports of cases of influenza and pneumonia received during the past four weeks, it is evident that respiratory infections are more prevalent. The increased incidence indicates that we may expect an outbreak of influenza during February and March. In the past, epidemics of influenza and pneumonia occurring during February and March have been less extensive than those in the fall months. Nevertheless, the disease, with all of its debilitating effects and serious sequelae, is always to be regarded with apprehension and persons are urged to heed the advice of avoiding crowds, going to bed upon appearance of first symptoms and taking sufficient rest to allow complete recovery before resuming activities. A physician should be in attendance.

Measles, also, is on the increase. During 1927, 58,963 cases were reported, and since the epidemics appear with definite regularity, this increased incidence of the last few weeks leads us to believe that measles will be one of the leading diseases of children during January, February, and March. Scarlet fever and mumps continue to prevail, though the cases of scarlet fever are reported to be very mild in most instances.

The present distribution of epidemic meningitis is somewhat disturbing.

The trichinosis season is upon us.

Smallpox is decidedly in evidence.

**Scarlet Fever Is Prevalent.**—A total of 12,816 cases of scarlet fever have been reported during the period January 1, 1929 to November 16, 1929. This is more than twice as many cases as were reported during the entire year of 1928. The relatively low number of deaths indicates that the disease, in general, is not of a severe type. There were fifty-four scarlet fever deaths in 1928, and during the first seven months of 1929 there were seventy-four such deaths. The most

alarming feature of scarlet fever lies in the complications that may occur and which may be productive of terrific damage in later years. The ears and kidneys are commonly involved and many cases of deafness and of kidney diseases have their beginnings in scarlet fever which was contracted during childhood. Most cases of scarlet fever occur in children who are under ten years of age, but a considerable number of cases are in those who are between the ages of ten and fifteen years. All persons are not susceptible to the infection. About half of all persons who are exposed to it contract the disease.

It is essential that all cases of scarlet fever be discovered early and placed in strict isolation, giving particular heed to the destruction of all discharges from the nose, throat, and ears. Scarlet fever is spread by the transference of the infection in the discharges from the noses and throats of persons who may be ill with the disease and those who may be carriers of the infection. In order to contract scarlet fever the susceptible individual must be within "striking distance" of the person who transmits the disease. The spray and droplets from the infected person may be ejected for a distance of several feet. At the present time, scarlet fever is the most prevalent of the respiratory infections.

**Crippled Child Act Helps Many.**—The so-called Crippled Children's Act has now been in effect for two years and during that period a total of one hundred and forty-three certificates, enabling physically handicapped children to receive treatment free of charge, have been issued. Three of these certificates were issued in 1927, sixty-eight in 1928, and seventy-two have been issued so far this year. The one hundred and forty-three children for whom these certificates were issued live in thirty-seven counties of the state. The services of twenty-six surgeons have been utilized in the correction of their physical handicaps and the patients have been placed in twenty-four different hospitals scattered throughout the state. About half of these children are no longer in hospitals, but are still under observation of doctors and nurses. The following table gives full information concerning the results obtained through the operation of the Crippled Children's Act during the two years it has been in operation:

Number of certificates issued .....	143
Cases dismissed as cured .....	9
Cases no longer hospitalized, but still under observation .....	70
Cases in convalescent homes .....	3
Cases pending .....	16
Cases which have not been hospitalized .....	12
Cases hospitalized .....	33
Number of surgeons .....	26
Number of hospitals .....	24
Number of counties .....	37

**Prevention of Blindness in Babies.**—During the past two years the State Department of Public Health has distributed 26,406 outfits for the prevention of blindness in babies. These outfits consist of two wax ampoules, each of which contains two drops of a two per cent solution of nitrate of silver. The eyes of newly born babies are peculiarly liable to infection and the nitrate of silver is placed in the eyes of the infant at birth, in order to prevent the development of infections which might result in blindness. The state law requires the State Department of Public Health to distribute this product gratuitously. Many of the outfits are for use in charity institutions and in families where this method of prevention would not otherwise be available. The policy involved in this procedure saves the state vast sums of money that might otherwise be required in the care of blind persons in state institutions. The cost of the nitrate of silver is negligible. The prevention of blindness in babies has well been cited as an instance in which "the protection of the citizen from the assaults of ignorance, indifference, or neglect, when they threaten his well-being and even his economic efficiency, is a duty which the state cannot evade and which he has a right to exact."



## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, M. D.  
Secretary of the Board

### News Items, February 1930

The annual report of the Board of Medical Examiners, recently submitted to Governor Young, shows that during the year 1929 590 certificates of all classes were issued, of this number 241 being reciprocity certificates, the largest number of applicants coming from Illinois, while Ohio shared second place with Missouri. Forty-nine California licensed physicians and surgeons have sought registration in other states and 234 licentiates died. Thirty licentiates were called before the board for various derelictions, the judgment of the board being as follows:

Guilty—Revoked .....	8
Guilty—Probation .....	7
Guilty—Penalty suspended .....	2
Dismissed .....	4
Deferred to February, 1930 meeting .....	9

Governor Young announced appointments of the following members to the State Board of Medical Examiners: Dr. Harry V. Brown, Glendale, who succeeds H. M. Robertson of Santa Ana; H. A. L. Ryfkogel, succeeding A. W. Morton, both of San Francisco; George L. Dock of Pasadena, who succeeds Wilburn Smith of Los Angeles. Those reappointed were Dr. Percy T. Phillips, Santa Cruz, president; Charles B. Pinkham, San Francisco, secretary and executive officer; W. R. Molony, Los Angeles; and J. L. Maupin, Fresno (San Bernardino *Telegram*, January 10, 1930).

With two convictions already made under California's new diploma mill law, inspectors of the State Board of Medical Examiners today were investigating reports of several fake doctors operating over the state. Albert Carter, Los Angeles investigator for the board, was searching for "Dr." Tsuneyoshi Koba, a Japanese, who posed as a graduate of Johns Hopkins Medical School, in Baltimore. Carter recently seized a diploma from the Baltimore school made out to Doctor Koba, and inquiry at the school revealed that the diploma was fraudulent. Conviction under the new law is a felony (San Francisco *Call-Bulletin*, January 3, 1930).

For the first time in the history of California law, a murder case was decided solely on briefs submitted when Dr. Florence Goodhall, woman chiropractor, was acquitted by Superior Judge Carlos Hardy of the killing, through an alleged illegal operation, of Mrs. Zeruah P. Mahan. The case was submitted to Judge Hardy thirty days ago. Mrs. Goodhall was convicted of second degree murder by a jury in Superior Judge Walton Wood's court last April 23, but Judge Wood granted the woman a new trial on motion of her counsel. . . . The theory of law on which Judge Hardy based his acquittal was that the uncorroborated testimony of an accomplice was insufficient for conviction (Hollywood *News*, December 3, 1929).

Among others who have been called before the board to show cause why their licenses should not be revoked at the meeting to be held in Los Angeles, February 4, are the following: Francis James Bold, M. D., Whittier, alleged illegal operation; F. E. Cramer, M. D., alleged federal narcotic charge; George E. Darrow, M. D., Artesia, illegal operation; Oscar W. de Vaughn, M. D., Oakland, alleged illegal operation; Clarence E. Edwards, M. D., San Francisco, alleged illegal operation; William A. Lang, M. D., Los Angeles, alleged illegal operation.

An indictment charging Dr. G. Carl H. McPheeters, Fresno physician and surgeon, with sending obscene matter through the mail, which was voted by the Federal Grand Jury in November 1926, has been dismissed on the authority of Attorney-General William D. Mitchell (Fresno *Bee*, January 7, 1930).

According to the San Francisco *Examiner* of December 6, 1929, Dr. Shirley W. Wynne, New York Commissioner of Health, has written a letter to the Federal Radio Commission asking whether some means cannot be found to stop fake doctors and quack-healing concerns from advertising over the radio. Judging from the complaints that come to the office of the Board of Medical Examiners, some missionary work along this line can be done in California.

The last gasp of the Berkeley Chiropractic College, 2158 Shattuck Avenue, Berkeley, was heard today, when the Supreme Court, on motion of Attorney-General U. S. Webb and the State Board of Chiropractic Examiners, dismissed a notice of appeal on the ground that it had not been perfected. The school was ordered closed by Superior Judge J. J. Trabucco, November 28, 1928, when it was shown the place was operated as a "diploma mill" and since then its proprietor, Percy Purviance, has battled in nearly every court in the region to continue its operation. His license to practice as a chiropractor was revoked by the board in 1926 . . . (Oakland *Tribune*, January 10, 1930). (Previous entries, December, 1925; February, July, September, October, 1926; February, 1927; March, May, and July, 1928.)

"Do you see yourself as others see you?" asked Mrs. A. E. Burton, 1931 Fairview Street. As a trade phrase the inquiry may have registered, but it had no startling effect on J. W. Davidson, special agent for the Board of Medical Examiners. His reaction was to arrest Mrs. Burton. Charged with practicing beauty culture and surgery without a license, Mrs. Burton was lodged in the city jail to be released on \$500 bail . . . (Oakland *Post-Inquirer*, January 7, 1930. On January 11, 1930, sentence of six months' probation was imposed, with the additional penalty that Mrs. Burton refund \$80 of the original fee charged the complaining witness.

"Declaring that there are chiropractors in California using their profession as merely a cloak and subterfuge for vice, Dr. S. J. Howell, secretary of the State Board of Chiropractic Examiners, today announced a vigorous housecleaning within the ranks of the profession. Operating in Los Angeles as the first stroke in the campaign, investigators of the Board have acted against thirteen chiropractors. Most prominent of these is Dr. Charles A. Cale, president of the Cale Chiropractic College of Los Angeles. He was charged with violating Section 288-a of the Penal Code, a moral charge, and was released on \$2,000 bail . . ."

According to reports, the California license of a physician who died in 1928 was seized by the police who reported its having been found hanging on the wall of a questionable massage and alleged bootleg establishment in the California Building, Los Angeles. The Arizona license of this deceased physician was seized at the same time.

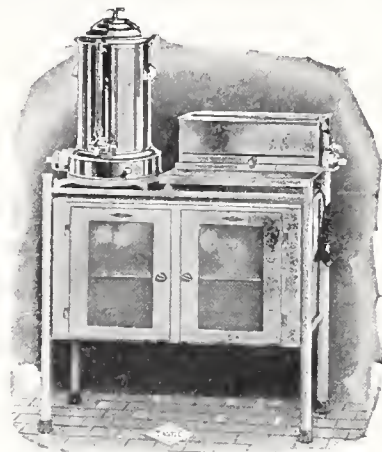
L. P. Tso on December 30 was sentenced in the courts of Los Angeles to pay a fine of \$100 or serve ninety days in the city jail following his plea of guilty to a charge of violation of the Medical Practice Act. All of said sentence except \$10 fine was suspended on condition that he close his place of business at once and not again violate the Medical Practice Act. The minimum fine under Section 17 of the Medical Practice Act is \$100.





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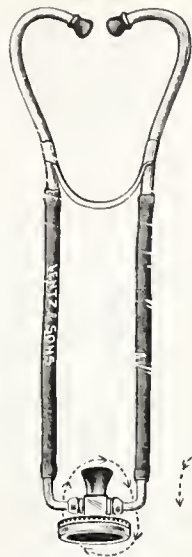
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### TRUTH ABOUT MEDICINES

(Continued from Page 31)

ism of influenza has been discovered and that it is hoped to prepare a vaccine. There is thus far little or no evidence to indicate that I. S. Falk, Ph.D., and his associates have progressed any further toward the solution of this problem than have workers in other parts of the world, now or in the past.—*Jour. A. M. A.*, December 21, 1929, p. 1975.

**Collum's Dropsy Remedy.**—For some years the Collum Dropsy Remedy Company of Atlanta, Ga., has been selling on the mail-order plan, an alleged cure for dropsy. The remedy consists of three boxes of large pills, or boluses, and five bottles of liquid preparation. The pills, or boluses, are known as "Remedy No. 1"; then there are two bottles of "Remedy No. 5," two bottles of "Remedy No. 6," and one bottle of "Remedy No. 7." The preparations were examined in the American Medical Association Chemical Laboratory. The boluses were found to consist essentially of a phlobaphene—that is, of anhydrides of tannin—to which had been added extract of licorice, a flavoring agent and minute traces of inorganic salts. Remedy No. 5, sold with the claim that it will purify the blood and strengthen the entire system, was evidently a syrup of ferrous iodid. Remedy No. 6, sold "for the stomach and digestion," was found to be a syrup of ammonium hypophosphite. Remedy No. 7, which the manufacturer declares will "relieve the cough that accompanies dropsy in a few days," was simply syrup to which had been added muriate of ammonia. It is obvious that whatever results are obtained in the reduction of the dropsical condition are due not to the Collum preparation, but to the heavy and repeated doses of Epsom salt, or other salines, that the victim is instructed to take at hourly intervals following the ingestion of the Collum boluses! As to the business itself: Dropsy, being a symptom and not a disease and usually the result

(Continued on Next Page)

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Sucrose (Cane Sugar).....	Nil	Nil
Ash (Mineral Matter).....	0.34%	0.35%
Total Solids .....	19.61%	19.32%
Preservatives		
Sulfurous Acid .....	Nil	Nil
Salicylic Acid .....	Nil	Nil
Benzoates .....	Nil	Nil
Borates .....	Nil	Nil
Saccharin .....	Nil	Nil
Calories per pound (based on sugar content) .....	350	338

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## TRUTH ABOUT MEDICINES

(Continued from Previous Page)

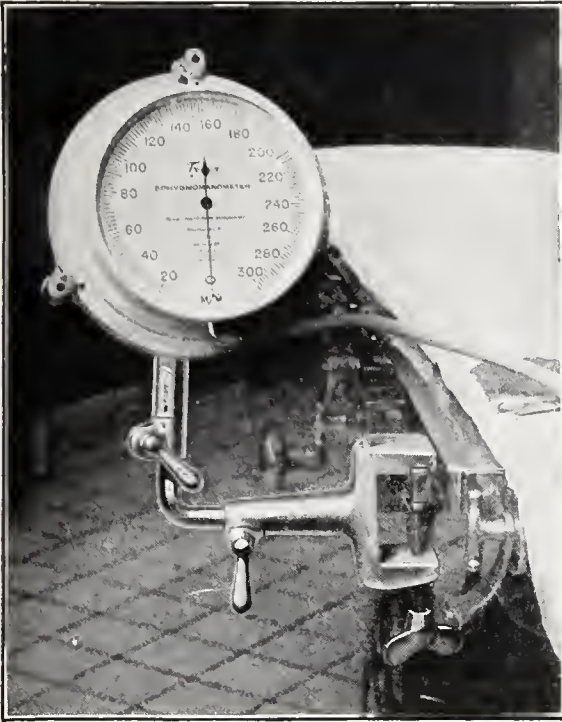
of incompetent heart or kidney action, is quite evidently not a condition that should be self-treated. The sale of remedies for the alleged treatment of dropsy is without justification.—*Jour. A. M. A.*, December 21, 1929, p. 1990.

**Composition of Ster-Tabs.**—These tablets, to be added to water in which instruments are to be sterilized, are claimed to be composed of: sodium carbonate (monohydrated) 18 grains and sodium nitrite  $7\frac{1}{2}$  grains per tablet.—*Jour. A. M. A.*, December 21, 1929, p. 1993.

**The Etiology of Influenza.**—I. S. Falk and his colleagues publish a preliminary report of their work on the etiology of influenza which does not go far beyond previous research on influenza. The difficulty in interpreting the results is largely due to the fact that it is difficult to distinguish clinical epidemic influenza from acute respiratory infections in monkeys and, indeed, in man. In 1892 Pfeiffer described an organism as the causative organism of influenza and since that time other allegedly causative organisms have been described. The green, producing streptococcus isolated by Mathers and Tunnicliffe in 1918, the one isolated by Rosenow in 1919, the filter-passing organism described by Meyer in 1919, and the organism discovered by Olitzky and Gates called *Bacterium pneumosintes*, would seem to deserve as much consideration as should be given, at least on the basis of the available evidence, to the germ recently announced by Falk.—*Jour. A. M. A.*, December 28, 1929, p. 2034.

**Mallophone.**—Mallophone is the proprietary name under which the Mallinckrodt Chemical Works markets an azo dye of the pyridin series. The patents on the product are owned by another corporation and the Mallinckrodt firm manufactures it under license from the holding company. It is regrettable that the





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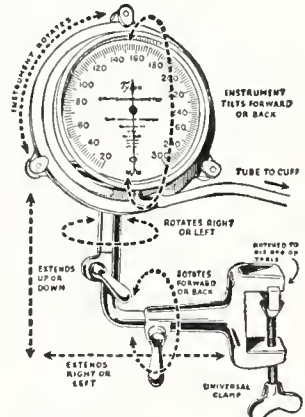


Diagram shows the universal nature of the clamp. Six adjustments accommodate the instrument to any position of table, anaesthetists or surgeons.

Mallinckrodt Chemical Works sees fit to use for this preparation a different proprietary name from that used by the patent owners. The use of a number of proprietary names for identical products creates chaotic conditions. Mallophone has not been submitted to the Council on Pharmacy and Chemistry, although the firm which owns the patent has submitted its product to the Council. The Mallinckrodt firm does not appear to have presented evidence to justify the medical claims which it advances. It is to be regretted that the Mallinckrodt Chemical Works offers its product to the medical profession without first submitting it to the Council on Pharmacy and Chemistry—a recognized body working in the best interests of both the profession and the public health. *Jour. A. M. A.*, December 28, 1929, p. 2044.

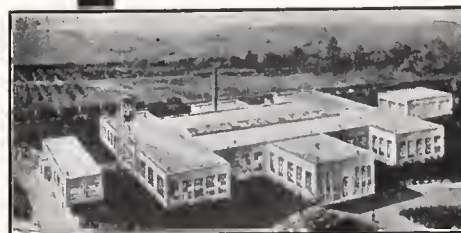
**Prof. Karl Sudhoff.**—Dr. Karl Sudhoff, who formerly occupied the chair of medical history in the University of Leipzig, has been visiting the United States for the first time. He came out, on the invitation of the Johns Hopkins University, Baltimore, primarily to give an address at the inauguration of the new department of medical history, of which Prof. W. H. Welch is the head. While in the United States Professor Sudhoff lectured also at Harvard and Yale universities, and at the Rockefeller Institute, New York.

Doctor Sudhoff was a medical practitioner in Germany for more than thirty years; a Prussian sanitary counselor for four years; and the first president of the German Society of the History of Medicine. He was the creator of what is the finest institute for the study of the history of medicine in the world, and is himself world-famous for his researches into some of the obscure corners of medical history. He is known for his translations of Arabian and ancient Hebrew texts, and of Egyptian hieroglyphics, and has written extensively on medical subjects.—*The Canadian Medical Association Journal*, December 1929.

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**X-ray Films in Relation to Safety.**—The recent New York City disaster, following on the heels of the San Francisco fire and the Cleveland Clinic catastrophe earlier in the year, has once more directed public attention to the film hazard. Hospital managers have written to the Industrial Accident Commission for help in meeting their different problems.

Conferences were held during December between the Commission's representatives, the San Francisco Junior Chamber of Commerce, officials of the city and county of San Francisco, spokesmen for the National Board of Fire Underwriters, the Board of Fire Underwriters of the Pacific, and engineers who have studied fire hazards. A pending ordinance before the San Francisco Board of Supervisors will probably not be pressed at this time, owing to the unanimous belief that the Industrial Accident Commission's safety orders will best meet the situation. The San Francisco Fire Department's delegates have expressed themselves as anxious to aid hospitals in other parts of the state, and uniformity in action will lead to this desired end.

The regulations of the National Board of Fire Underwriters for the storage and handling of photographic and x-ray nitrocellulose films have been sent to all of California's hospitals. These regulations were prepared by the National Fire Protection Association and approved by the national board. They are in printed form and will undoubtedly be the basis of the permanent requirement. The Industrial Accident Commission has circularized the hospitals, strongly recommending the adoption of the regulations, and, with the assistance of the fire departments of the different cities, will make all the inspections possible within the next few weeks.

The regulations describe proper methods of storing unexposed films, or negative films, whether in hospitals, warehouses, or in portrait and commercial studios. The instructions are clear. General advice



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is given at the end of the pamphlet. These regulations do not cover nitrocellulose motion-picture films.

The next step is to issue permanent safety orders. The Industrial Accident Commission is planning the appointment of advisory committees to assist its engineers in preparing the standards that will have legal sanction. It is proposed to use the National Board of Fire Underwriters' regulations and to add such additional orders as may seem best for California.

### **Early or Moderately Advanced Cases of Leprosy.—**

The Public Health Service has recently issued a report on leprosy from the leprosy research station of the Service in Hawaii that should be of special value to physicians who are interested in diseases of the skin and of the nervous system. This report points out that leprosy is by no means always the repulsive condition that it is traditionally regarded as being, but that often the signs and symptoms are so slight or so indefinite that there is required great discrimination upon the part of the physician, and perhaps he may require repeated examinations before coming to a decision in some cases. The microscope is often of value in aiding in making a diagnosis.

The general public is accustomed to regard leprosy as abhorrent in every respect whereas, in fact, many lepers might mingle with the public without attracting the slightest attention.

The Public Health Service study is based upon the minute investigation of two hundred and fifty cases by experts, and it is emphasized that the onset is usually insidious and that perhaps two years on an average will elapse before the patient is admitted to a hospital.

A point of interest is seen in the long periods of quiescence of the disease during which the victim is apparently free from any signs of the infection.—*Public Health Service*, January 17, 1930.

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**Veronal Law Became Effective August 14.**—Drug-gists must bear in mind that the so-called Veronal law, passed by the recent legislature, became effective August 14. While there is still much difference of opinion regarding just what preparations are covered under the provisions of the law, until a test can be made and a judicial ruling can be obtained, the list of preparations which may be sold only on non-refillable prescriptions will include: Veronal Soda or Powder, Veronal Tablets or Powder, Neonol Tablets (Abbott), Barbitol Tablets or Powder, Barbitol Soda or Powder, Ipral Tablets (Squibb), Amytal Tablets (Lilly), Amytal Compound Capsules, Luminal Tablets, Luminal Soda, Allonal Tablets, Phanodorn Tablets, Cibalgine Tablets, Peralgia Tablets, Medinal Tablets, Hypnatol (Wyeth), Brominyl and Barbitol (Upjohn), Dial Tablets, Dial Ampoules, Dilacetin Tablets, and Cibalgine Ampoules.

The following preparations contain less than forty grains to the ounce and can be sold: Elixir Amytal, Compound Syrup Amythme, Adalin Luminal Tablets, Lumaglin Tablets, Pyraminal Tablets, Elixir Pyraminal, Elixir Luminal, Elixir Veronal, Kres Luminal, Neuronidia, Elixir Alurate, Elixir Dial, and Elixir Cibalgine.—*West Coast Druggist*, November 1929.

**Health Hazards in Chrome Plating.**—Previous to the World War the process of chrome plating was covered by patent rights, and only the large industries were in a position to carry on the work. After the war the federal government released a number of formulas to industry, with the result that chromium as a noncorroding and a fire-resisting protective for metal was universally adopted, so that even the small type of plating shop was able to utilize the process.

The method of plating consists of placing the metal (which in some industries may have already been plated with a metal such as nickel) in a tank which contains chrome compounds and chromic acid. Elec-



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tric current is supplied to the solution, one pole of the current usually terminating in a lead plate, the other pole attached to the metal rod upon which the material to be plated is suspended in the solution.

With the electric current on, and during the placing of the metal in the tank, oxygen and hydrogen gases are given off; also, when metal is placed in the solution or removed, some fumes are also noticeable.

The gases in escaping carry small particles of chrome acid into the air. It is the inhalation or swallowing of the acid carried from the tank in this manner which causes the greatest damage to the tissues of the workers.

Attention has been directed principally to the effect upon the skin due to the vapor and splashing of the liquid, resulting in a dermatitis, which in many cases, develops into ulcers. Later it was found that the action upon the mucous membranes caused perforation of the nasal septum; it was then that marked attention was directed to the grave health hazard existing in the industry.

However, this condition was not limited to the workers directly engaged in the process. At one factory it was discovered that a number of female workers in the same room, but at some distance from the tanks, also suffered from nasal trouble, due to the chromic acid in the air of the room.

One cause of the injury to the workers was traceable to the lack of efficient exhaust. The indirect effect was ascribed to inefficient general ventilation, due to the air currents carrying the minute amounts of acid increased during the action of placing material in the tank as well as in removing the same, to remote portions of the room.

The distressing part of the nasal perforation is the irreparable damage which results to the cartilage in the nose. The ultimate effect upon the worker, due to the presence of a small opening between the nares, can readily be understood.—C. T. Graham-Rogers, M. D., *Industrial Hygiene Bulletin*, December 1929.

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stand and sympathize with his perfectly natural and human reaction to the ingratitude of his patient.

The medical profession does not receive the gratitude to which they are justly entitled for their untiring efforts in the interests of suffering humanity. Rarely does the courage, devotion, and self-sacrifice of the doctor receive even a passing comment of praise. The world forgets that the doctor must meet the material obligations of life in exactly the same manner as those outside the profession. It forgets that in common with all the rest of mankind the doctor needs sleep, rest, recreation, encouragement, and loyalty.

But the doctor carries on. Neither illness nor fatigue, discouragement, or financial strain can swerve him from his loyalty to the ideals of his calling. Your counsel is proud to be the champion and advocate of the members of so noble a profession.—By Lloyd Paul Stryker, Esq., Counsel, Medical Society of the State of New York, *New York State Journal of Medicine*, December 1929.



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temperature is lowered, and the cough becomes productive. Auricular fibrillation that develops occasionally in similar pneumonias or other types of pneumonia where the toxemia is great, has been changed to a perfect normal rhythm after a few diathermy treatments."

You will value diathermy as an ally in your battles with pneumonia at this season, aside from the satisfaction derived from having utilized every proved therapeutic measure that present day medical science offers.

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**The William H. Welch Medical Library.**—The new medical library of Johns Hopkins University, Baltimore, and the department of the history of medicine were inaugurated with appropriate and delightful ceremony on October 17 and following days.

The building is situated on East Monument Street, not far from the School of Hygiene, and presents a rich and dignified appearance. It is designed in a plain Italian Renaissance style which is singularly attractive. It is well laid out internally and much of the charming effect is due to the free use of many kinds of richly colored marble. The cost was just a little less than \$600,000, and there is available about \$55,000 yearly for maintenance. There is accommodation for 500,000 books.

The stacks, which are identical with those recently installed at the Vatican, occupy the center of the building and extend for the full three stories. The first two floors are taken up with the library proper and the third floor is devoted to the department of the history of medicine. In this building are concen-

trated the books belonging to the faculty of medicine, the Johns Hopkins Hospital, and the department of the history of medicine.—*Canadian Medical Association Journal*, December, 1929.

### Livestock Study in Relation to Human Interests.—

"The livestock industry supplies man not only with food, clothing, leather, and many other necessities of life, but it also serves man in scores of other ways. It yields fertilizer to maintain the fruitfulness of our fields, gardens, and orchards, and contributes many products and by-products to our arts and industries. Certain of the glands of animals yield many valuable substances used in human medicine, pepsin, insulin, and adrenalin among them. Not only is there close relationship between animal diseases and human health, but the study of livestock problems and sciences dealing with animal diseases contributes in a surprising degree to human health and welfare."—*United States Department of Agriculture*.



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**Important Points to Consider Regarding Infantile Paralysis.**—The United States Public Health Service has stated recently in a conference with state health officers that throughout the greater part of the country it may be expected that about one paralytic case of infantile paralysis per one hundred thousand population will occur between the first day of December and the first day of June each year, and in the other six months, about four to fourteen cases. The maximum incidence, an average of two cases in three weeks per one hundred thousand, is reached in mid-September.

Ever since 1916 health officers have looked with especial concern on a definite rise during the month of June, but there have been several examples of a notable increase in reporting which was not paralleled by any such actual increase in incidence. In the warmer parts of the United States fewer cases occur, though the distribution follows about the same proportion by seasons as in the North. On the Pacific Coast the rise appears to begin a few weeks earlier and reach a less abrupt peak somewhat later, with a relatively high prevalence maintained longer than is usual elsewhere. It would seem that other places which have a comparatively even temperature range throughout the year, with a slightly retarded maximum, should show the same characteristics.

The measures through which might be expected a real diminution of incidence are those which diminish human contacts in general, but the drastic closing of all places of assembly is justifiable only with a very high incidence of, say, five or ten times the usual, and even in such a case the long incubation period would make it likely that in a restricted community the actual spread of the infection had begun to diminish before the alarm was sufficient to resort to such extremes.

Every help should be given to the medical profession and the public to aid in the prompt and accu-

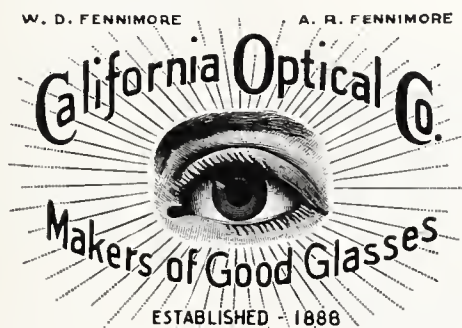


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rate diagnosis of the cases. Pamphlets are available for distribution to physicians to refresh their memories on the early suspicious and characteristic signs of the disease.

Organization for treatment of preparalytic cases by convalescent serum is one of the first measures to be considered. Since, however, this is adapted more for metropolitan areas than for widely scattered settlements, it is probable that in most cases it will be a function of medical societies, medical schools, and local health authorities rather than of the state. In any case, favorable as the results appear to be, we must remember that the method is still on trial, and every effort possible should be used to secure its practical evaluation.

Probably the greatest good that the state department of health can do is in the prevention of deformities and crippling as an aftermath of recognized paralytic cases. The early treatment should certainly be under the control of the local physician. In connection with the circularization and publicity, to aid in the early diagnosis, emphasis should be placed on the necessity of absolute and prolonged rest in bed, in a position to forestall and prevent any tendency to deformity, by fixation if necessary. There comes a time in practically every case, however, and it may come very soon, when the proper care becomes too irksome for the family to carry on without the moral support and stimulus of some such agency as a consultant orthopedist with nurses or physiotherapists particularly skilled and trained in this disease; and it is a rare family which can afford the expense of such prolonged, continuous, and special skill unless the treatment is supervised under some such auspices as those of the state or municipal department of health. Adequate hospitalization of these cases is out of the question. A useful pamphlet on muscle training is available as a reprint from the United States Public Health Service.—*United States Public Health Service*, October 29, 1929.

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Reprinted from "California and Western Medicine," September, 1927.

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**Federal Court Rules on Drug Labels.**—A far-reaching decision on the labeling of medicinal preparations has been handed down by the United States Court of Appeals for the Ninth Circuit, say the officials of the Food, Drug and Insecticide Administration, of the United States Department of Agriculture.

According to the decision of the Court of Appeals, the use on labels of medicinal preparations of language which, when read literally, is not a statement of curative or therapeutic properties, but owing to attendant circumstances, may be understood as such, brings these labels within the scope of the Federal Food and Drugs Act just as definitely as if direct statements appeared.

This decision was made upon appeal by the United States Government from a judgment entered in the District Court for the Western District of Washington, dismissing a case brought against certain medicinal preparations which, the government alleged, bore false and fraudulent therapeutic claims on the labels. The Federal Food and Drugs Act, under which this action was brought, is designed, among other things, to prevent the sale in interstate commerce of medicinal preparations bearing false and fraudulent statements concerning their efficacy in treating disease.

The lower court dismissed the libel on the ground that it failed to allege facts sufficient to show a viola-

tion of the law, in that the statements on the labels to which the government took exception were not therapeutic or curative claims but were merely reports indicating that physicians had obtained favorable results from the use of the nostrum, each "report" being preceded by the statement "We have received many letters from physicians reporting."

The Circuit Court of Appeals, however, held that language such as that used would tend to engender a belief on the part of possible buyers that the use of the drugs would afford relief. "Unless we discredit their mental competency such, we must presume was the intent and expectation of the proprietors," said the Circuit Court. "Their contention is that they have such letters or reports and that fact constitutes a competent defense, whatever may be the character of the drugs. But if, as is alleged, the drugs are worthless, the proprietors cannot escape responsibility by hiding behind the phrase 'the doctors say'. Couched in such language undoubtedly the printed matter makes a more persuasive appeal to the credulity of sufferers from these diseases than if the representations thus implied were made directly upon the authority alone of the proprietors, and for that reason they are not less but more obnoxious to the law."—*Journal of Iowa State Medical Society*, September 1929.





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**Problem of Rehabilitation of the Crippled Child.**—Resolutions adopted by the first world conference on the problem of the cripple, held at Geneva, Switzerland, August 1929.

### **PUBLIC STATEMENT OF POLICY**

Whereas, In the discussions of this conference certain clear and well-defined propositions have been evolved and have been received with general approval; and

Whereas, We believe it to be our duty as students of the problems incident to the relation of society to the crippled, finding him and securing for him medical examination and diagnosis, treatment, care, education and vocational training and placement as well as preventing crippling conditions; and as workers for the solution of these problems; to place before the public, the results of our deliberations; now, therefore be it

Resolved by the World Conference for Crippled Children that we declare:

First: That every cripple has the right to expect of his state or county physical, mental and social equality.

Second: That assistance to crippled persons is not only a humanitarian but an economic social responsibility.

Third: That there is a regrettable lack of accurate information as to the number of cripples in many of the countries: that in these, adequate surveys should be made without delay that their results may guide intelligent comprehensive action; and that in all countries where such legislation does not now exist laws be enacted making it compulsory upon the part of physicians, surgeons, midwives, nurses, and teachers to report crippling conditions to the proper authorities.

Fourth: That a great need exists for an adequate number of competent professional workers, both surgical and pedagogical, and that universities throughout the world be urged to create courses where they do not now exist for the training of a larger number



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of orthopedic surgeons, nurses, and teachers, to provide for compulsory examinations therein, and to establish where not at present existing Chairs in Orthopedics.

Fifth: That all efforts in the furtherance of the education and vocational training and placement of the crippled should be encouraged and assisted in every possible way, for without education, training and equipment to fit the cripple to take his place in the world and putting him where he can have an equal opportunity, much of the remedial effort is wasted.

Sixth: That responsibility does not end with remedying existing conditions but must extend to preventive work and the practical eradication ultimately of crippledom.

Be it further Resolved, that copies of these resolutions be sent to all known societies engaged in work for the crippled, to the various universities throughout the world, to the health departments of the several governments, to all medical and surgical societies and journals, and to the leading newspapers and general publications.

\* \* \*

Whereas, The solution of the problems incident to the locating or finding, treatment, care, education and vocational training and placement of crippled persons is a task confronting every nation in the world today; and

Whereas, Much progress has been made in many countries in this important field of endeavor, which involves not only humanitarian and philanthropic considerations, but economic welfare; and

Whereas, The International Society for Crippled Children is making a forceful effort to bring about a unity of thought and action in this connection, and is receiving the cordial coöperation of many agencies in many countries; and

Whereas, The Child Welfare Committee and the Health Organization of the League of Nations are in

(Continued on Next Page)

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(Continued from Page 53)

a position to further this activity to the very great advantage of its member nations, and thus to render a tremendous service to the whole world; therefore be it

Resolved by the delegates to the World Conference of Workers for Crippled Children now in session in the city of Geneva, Switzerland, and composed of representatives of twelve countries—Great Britain, Sweden, Belgium, the Netherlands, Germany, Czechoslovakia, Austria, Hungary, Spain, Switzerland, Canada, and the United States—that we join in an earnest appeal to the League of Nations that the enumeration, treatment, care, education, and vocational training and placement of the crippled, also the presentation of the causes of crippling conditions among children, be made subjects of investigation, study, report and recommendation at the earliest time consistent with pending activities; and that the League of Nations be requested to establish a department in the secretariat of the League for the accomplishment of these purposes.

\* \* \*

Whereas, A conference of representatives of twelve nations has been assembled and is in session in Geneva for the consideration of the problems incident to the care, treatment and education of the crippled; and

Whereas, The deliberations of the conference have demonstrated the great desirability of a close working union for the solving of such problems on a world basis; and

Whereas, Such a union could be and should be formed to develop an international plan in which the representatives of all agencies in all countries could participate and have a voice and vote; therefore it is

Resolved, By this conference that the present Committee on Resolutions be continued as an Executive Committee, with the right of substitution and with the right to coopt members from other countries, to develop such an international plan, and that in the



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meantime the societies of the several countries represented in the conference not already members of the International Society for Crippled Children (and any others applying for membership) be admitted as associate members of such society.—*International Society for Crippled Children, Inc.*

The foregoing resolutions adopted unanimously. August 2, 1929.

**Claim for Funds Covering Medical Treatment Denied.** Appropriations for the Veterans' Bureau are not available for the payment of medical care and treatment of families of emergency Army officers who served during the World War, the Comptroller-General, J. R. McCarl, has ruled, it was stated orally September 24 at the General Accounting Office.

The ruling was made in a case involving a claim of a former emergency Army officer for hospitalization treatment for his wife, a former Red Cross nurse, who had seen active service during the war. The Comptroller-General viewed various legislation granting certain privileges to officers of the Regular Army who have been retired and the special law passed by Congress on May 24, 1928, which granted, in certain instances, similar privileges to those emergency officers who served only during the World War, it was pointed out.

Mr. McCarl concluded as a result of his examination of the retirement privileges granted Army officers that members of families of beneficiaries of the Veterans' Bureau are not found to be included among those for whom medical, surgical and hospital treatment is provided under the World War Veterans' Act.

Viewing the subject further, the Comptroller-General, it was explained, held that the existing law being specific for medical treatment, it was obvious that medical treatment is not included as one of the privileges intended to be extended to retired emer-

(Continued on Page 56)

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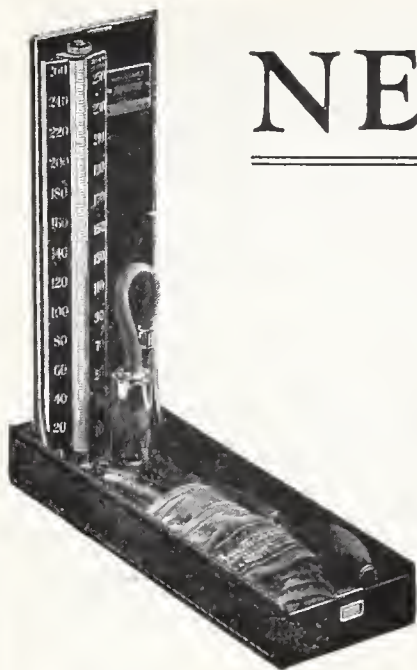
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(Continued from Previous Page)

agency officers as a privilege accruing to officers of the regular establishment retired for physical disability.

Nearly half of the approximately 28,000 veterans treated in this country under the hospitalization program of the United States Veterans' Bureau are non-service connected patients, or patients whose present disability was not incurred in service, and on account of the present inadequacy of housing facilities more than 7000 victims of mental diseases are hospitalized in institutions unauthorized by the bureau, according to an oral statement made available September 24.

The congressional privilege of hospitalizing any veteran of a war in which this country participated, plus the statutory obligation to provide hospital attention for every physically or mentally afflicted veteran of the World War, and certain other veterans

of preceding wars, has resulted in an overflow of patients and the unavoidable assignments to institutions not specified by the government bureau charged with hospitalization, it was explained.

That immediate legislative aid is needed in order to correct the existing situation is assured by a recent announcement from the bureau that the present appropriation of some \$15,000,000 will not defray the costs of a program contemplated to permanently remove the obstacles encountered since authorized hospitalization was inaugurated. According to the statement about \$13,000,000 of the appropriation is now available, and while this sum should better conditions for a limited time, a thorough correction cannot be realized without additional expenditures.

Approximately 13,000 patients confined to Govern-

(Continued on Page 59)



# APPROVED CLINICAL LABORATORIES

## Excerpts from American Medical Association Essentials for An Approved Clinical Laboratory

### Definition

*"\* \* \* A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body."*

*"Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved."*

*"The housing and equipment should be sufficient to permit all essential technical procedures to be properly carried out."*

### The Director

*"The director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry or other allied subjects, for at least three years. He must be a man of good standing in his profession."*

*"The director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work."*

*"The director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports."*

*"The director may have assistants, responsible to him. All their reports, bacteriologic, hematologic, biochemical, serologic and pathologic should be made to the director."*

### Records

*"Indexed records of all examinations should be kept. Every specimen submitted to the laboratory should have appended pertinent clinical data."*

### Publicity

*"Publicity of an approved laboratory should be directed only to physicians either through bulletins or through recognized technical journals, and should be limited to statements of fact, as the name, address, telephone number, names and titles of the director, and other responsible personnel, fields of work covered, office hours, directions for sending specimens, etc., and should not contain misleading statements. Only the names of those rendering regular service to the laboratory should appear on letter-heads or other form of publicity."*

### Fees

*"\* \* \* There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group. \* \* \*"*

The following laboratories in California are among those approved by the Council on Medical Education and Hospitals of the American Medical Association:

**Clinical Laboratory of Drs. W. V. Brem, A. H. Zeiler and R. W. Hammack,  
Pacific Mutual Building, Los Angeles, California.**

**Dr. Marion H. Lippman's Laboratory, Butler Building, 135 Stockton Street,  
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**The Western Laboratories, 2404 Broadway, Oakland.**

These laboratories use only standard methods and are fully equipped with the most modern apparatus to make all clinical examinations of value in: Pathology (frozen sections when ordered), Bacteriology, Chemistry, Hematology, Serology, Medico-legal, Basal metabolism, Blood chemistry, Autogenous vaccines and all other laboratory aids in diagnosis.

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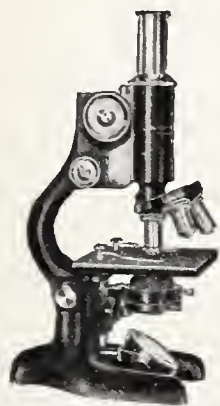
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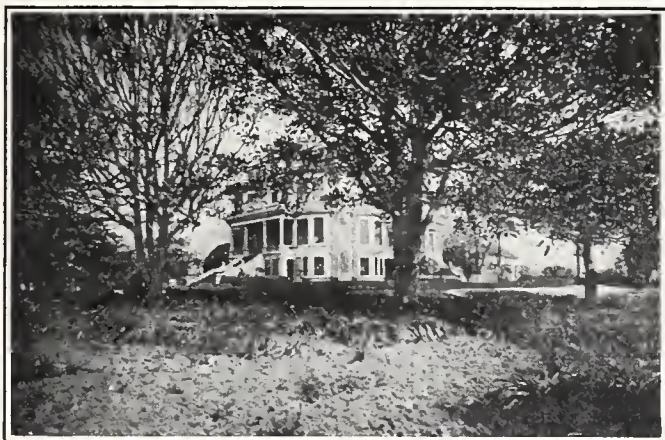
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(Continued from Page 56)

ment care are psychiatric sufferers, it was stated, and their number expands each year despite the fact that many already are retained in institutions not authorized by the bureau.

Taking advantage of the privilege extended by Congress, and believing its action warranted by sympathy and humaneness, the bureau during certain periods of recent years has kept its facilities constantly taxed to a maximum by accepting veterans of wars regardless of classification, it was declared. However, the increase in the number of patients from the World War, and their mandated acceptance, has brought the bureau to its present situation of having many patients under care who are not dismissible, and yet needing their provisions and allotments for service-connected veterans entitled to full care. When regularly equipped institutions are not available for the housing of World War patients, space and facili-

ties must be contracted by the Bureau, and paid for from the appropriation, it was explained.

This surplus of patients, who should be housed in Government hospitals, must necessarily be detained in state-owned institutions, the statement pointed out, and in nearly every instance these non-federal confines are overcrowded.—*The United States Daily*, September 25, 1929.

**Storage and Preservation of Films.—Resolutions:**

Whereas, The storage and preservation of used x-ray films has recently become an economic and insurance problem, and

Whereas, The reports of the roentgenologists responsible for the diagnoses are of decidedly more value and importance than the films, and

Whereas, These reports are filed with, and become part of, the records of each case, making it unneces-

(Continued on Page 61)



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Grains per gallon		
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Sodium Bicarbonate	252.6	205.53
Sodium Chloride	94.0	21.94
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Aluminum Oxide	0.13	
Silica	6.42	2.63
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Continued from Page 59)

sary that large numbers and quantities of old and used x-ray films be preserved and retained for long periods of time, it is therefore

Resolved, by the Council of the Chicago Roentgen Society, That it is the sense and judgment of this Society, that it is not necessary to preserve any x-ray films for a longer period than two years after their exposure, and that in all cases where there is no likelihood of legal proceedings—such as ordinary clinical cases, medical conditions, gastro-intestinal and urinary tract examinations—it is deemed unnecessary to preserve or retain the x-ray films for a longer period than six months after their exposure.

This is, however, not in any way to be construed as discouraging the preservation of films of specially interesting or unusual conditions, as these are to be preserved because of their value for comparative study and for teaching purposes. And it is further

Resolved, That referring physicians desiring to preserve the x-ray films of their own patients, be encouraged to do this, and it is hereby declared permissible and proper practice for roentgenologists to deliver the films to the referring physicians in such cases. And it is further

Resolved, That a copy of these Resolutions be sent to the *Bulletin of the Chicago Medical Society*, the *Illinois Medical Journal*, the *Journal of the American Medical Association*, *Radiology*, the *American Journal of Roentgenology* and *Radium Therapy*, for publication, and to the American College of Radiology, the American College of Surgeons, and the American College of Physicians with request that the same be published in their official journals, and to the Sections of Radiology of the American Medical Association and of the Illinois State Medical Society, and to the Chief of the Fire Prevention Bureau of Chicago and the Underwriters' Laboratories, Inc., of Chicago, and to the editors of *Hospital Management* and *The Modern Hospital*.—*Radiology*, September 1929.

Semi-Centennial to Be Celebrated by the University of Southern California in 1930.—Founded a half century ago, in 1880, the University of Southern California is preparing to commemorate its fiftieth birthday by a fitting and significant Semi-Centennial Celebration in June, 1930. Graphically stressing the university's highest aims and achievements—scholastic endeavor, academic advancement, worthy research, and moral idealism—the anniversary celebration will occupy a week.

Educators of note, Trojan alumni, scientists and citizens of this and other countries will gather in Los Angeles to pay homage to those whose work contributed to the development of the university, and to witness the re-enactment, in pageant and song, of events in the history of the institution.

It was in August, 1880, that the incorporation of the western educational institution was achieved. Then a trio of donors presented 308 lots in West Los Angeles to a pioneer board of directors to finance the proposed school. By the articles of incorporation, the State of California granted the name, The University of Southern California, to the new institution, and the policy of co-education was established.

When the University of Southern California opened its doors, fifty-five students gathered in the first frame building under the supervision of ten instructors. Los Angeles was at that time a frontier town of the Southwest with a population of 11,183, and with forty-three teachers in its school system. City and university have grown apace, for recent figures show that with one exception, the population of Los Angeles has doubled every ten years, while the enrollment of students at S. C. has tripled every decade except the third. Los Angeles has changed from a village to a metropolitan center, and the University of Southern California has evolved from a small college of liberal arts to a many-sided university.

Twenty schools and colleges are manned by more

(Continued on Next Page)



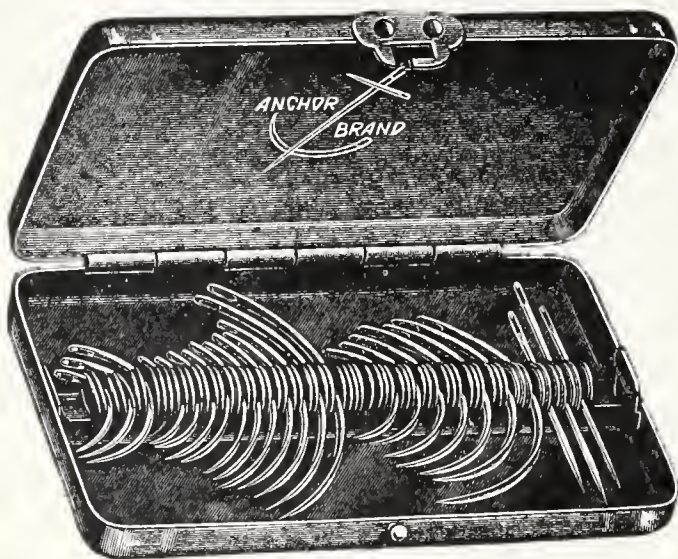
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(Continued from Previous Page)

than 400 faculty members, and serve a yearly enrollment of more than 15,000 students.

The campus of S. C., known as University Park, adjoins Exposition Park, which contains the Los Angeles Museum (history, art and science) and the California State Exposition Building (with exhibits of the state's resources and industries).

Dr. R. B. von Klein Smid, president of Southern California since 1921, voices the pledge of the trustees, the administration and the faculty of the university as follows: "The University of Southern California will hold fast to its conviction that education is a living process, as adjustable as life itself, using the materials provided by the past to make the products of the future. It will continue to devote itself to what it conceives to be the urgent problems of higher education in this present age—the adapting of university facilities to the needs expressed in modern society."

**Heart Disease and Accidents.**—The increase in serious accidents due to "heart disease" calls attention to the phase of the cardiovascular diseases which renders an individual suffering from such a condition a possible menace to the health and happiness of others. Frequent accounts of such accidents may be read in the daily press. They are usually attributed to "sudden heart failure," but the name "sudden heart failure" is in itself paradoxical; the condition nearly always occurs in persons who have had heart disease for some time. It is sudden only because there is an acute change or rearrangement of the circulation.

The need of requiring drivers of automobiles and railroad trains, motormen, elevator operators, and others in occupations where the lives of many are dependent upon perfect mental and physical functioning, to submit to an examination to prove their ability to cope with the demands of their work without danger to themselves or others, seems obvious.

(Continued on Page 64)



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The Colfax School for the Tuberculous offers the following advantages:

1. Patients are given individual care by experienced tuberculosis specialists. The patient is treated according to his individual needs.
2. Patients are taught how to secure an arrest of their disease, how to remain well when once the disease is arrested, and how to prevent the spread of the disease.
3. Patients have the advantage of modern laboratory aids to diagnosis and of all modern therapeutic agencies.
4. The climate of Colfax enables the patient to take the cure without discomfort twelve months in the year. We believe climate is secondary to medical supervision and rest, but the fact remains that it is easier to "cure" under good climatic conditions than where these climatic conditions are absent.
5. Colfax is accessible. It is on the main line of the Ogden Route of the Southern Pacific R. R. and has excellent train service. It can be reached by paved highway, being on the Victory Highway, with paved roads all the way to Colfax.

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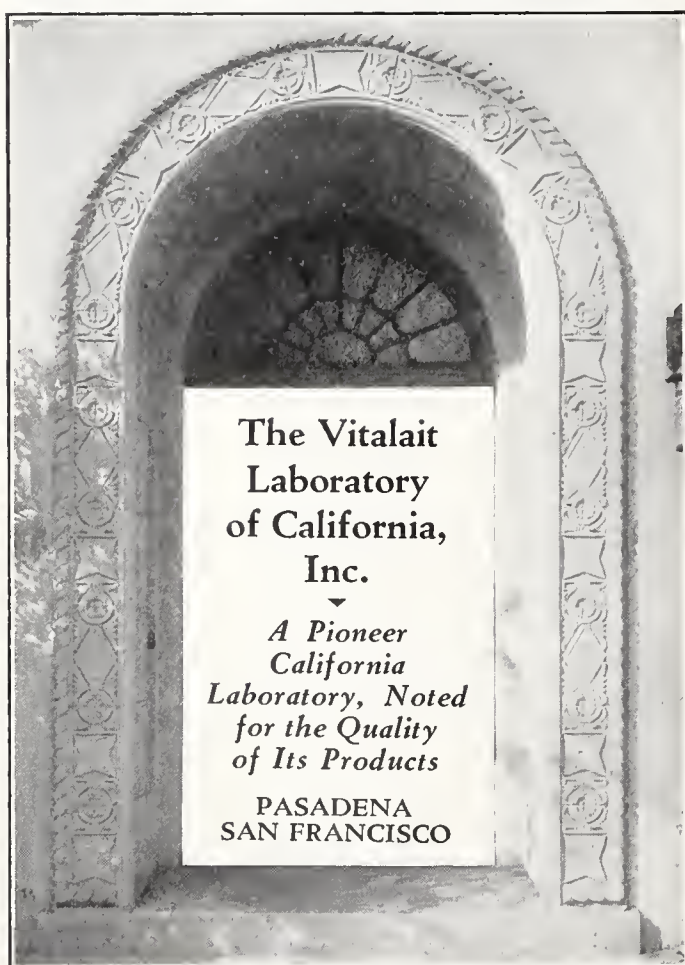
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*Literature on request*

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(Continued from Page 62)

Applicants for automobile drivers' licenses, in this state at least, are required to meet certain standards as to sight. It would seem equally important that persons suffering from serious heart disease be prevented from occupying positions where attending stress and effort might prove to be dangerous.—Extract of article by Dr. Albert S. Hyman, in *American Journal of Public Health*, October 1929.

**Fellowship Pledge.**—Recognizing that the American College of Surgeons seeks to develop, exemplify, and enforce the highest traditions of our calling, I hereby pledge myself, as a condition of Fellowship in the College, to live in strict accordance with all its principles, declarations, and regulations.

In particular, I pledge myself to pursue the practice of surgery with thorough self-restraint and to place the welfare of my patients above all else; to advance constantly in knowledge by the study of surgical literature, the instruction of eminent teachers, interchange of opinion among associates, and attendance on the important societies and clinics; to regard scrupulously the interests of my professional brothers and seek their counsel when in doubt of my own judgment; to render willing help to my colleagues and to give freely my services to the needy.

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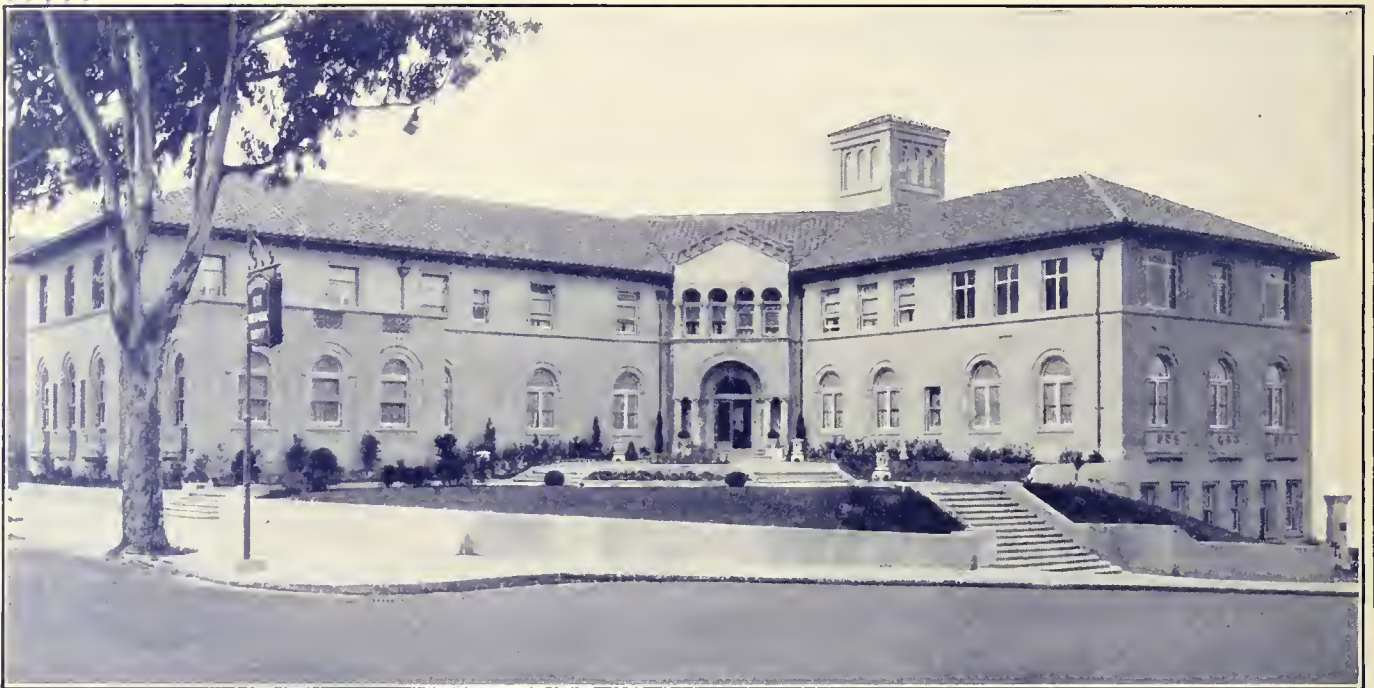
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# Miscellaneous California Medical Organizations

**State Board of Health**  
San Francisco, 337 State Building  
Los Angeles, 823 Sun Finance Building  
Sacramento, Forum Building  
President, G. E. Ebright, San Francisco.  
Director, Walter M. Dickie, Berkeley.

**State Board of Medical Examiners**  
San Francisco, 623 State Building  
Los Angeles, 821 Associated Realty Bldg.,  
510 West Sixth Street  
Sacramento, 908 Forum Building  
President, P. T. Phillips, Santa Cruz.

Secretary, C. B. Pinkham, 623 State Building, San Francisco.

**Southern California Medical Association**  
President, Joseph K. Swindt, Pomona.  
Secretary, William J. Norris, 509 Medical Office Bldg., 1136 W. 6th Street, Los Angeles.

**California Northern District Medical Society**  
President, J. D. Lawson, Woodland Clinic, Woodland.  
Vice-President, Dan H. Moulton, Chico.

Secretary, Albert K. Dunlap, Sacramento Hospital, Sacramento.  
Treasurer, Walter E. Bates, Davis.

**Better Health Foundation**  
President, Reginald Knight Smith, 490 Post Street, San Francisco.  
Chairman Executive Committee, Walter B. Coffey, 65 Market Street, San Francisco.  
Treasurer, John Gallwey, 1195 Bush Street, San Francisco.  
Secretary, Celestine J. Sullivan, 490 Post Street, San Francisco.

## Woman's Auxiliary of the California Medical Association

**State Auxiliary Officers**  
President, Mrs. H. S. Rogers, Sunny Slope Road, Petaluma.  
First Vice-President, Mrs. W. H. Geistweit, 810 Medico-Dental Building, San Diego.  
Second Vice-President, Mrs. John Hunt Shephard, 145 South Twelfth Street, San Jose.  
Secretary-Treasurer, Mrs. R. A. Cushman, 632 North Broadway, Santa Ana.

**Officers of County Auxiliaries**  
Contra Costa County—President, Mrs. J. M. McCullough, Crockett; Secretary-Treasurer, Mrs. S. N. Weil, Rodeo.  
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## Nevada State Medical Association

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R. P. ROANTREE, Elko.....President-Elect  
H. W. SAWYER, Fallon.....First Vice-President  
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HORACE J. BROWN, Reno.....Secretary-Treasurer  
R. P. ROANTREE, D. A. TURNER,  
S. K. MORRISON.....Trustees  
Place of next meeting.....Reno, September 26-27, 1930

## Utah State Medical Association

H. P. KIRTLEY, Salt Lake City.....President  
WILLIAM L. RICH, Salt Lake City.....President-Elect  
M. M. CRITCHLOW, Salt Lake City.....Secretary

J. U. GIESY, 701 Medical Arts Building,  
Salt Lake City.....Associate Editor for Utah  
Place of next meeting.....Salt Lake City, September 9-11, 1930

## Hospitals and Sanatoriums

The institutions here listed have announcements in this issue of CALIFORNIA AND WESTERN MEDICINE

<b>ALEXANDER SANITARIUM</b> Nervous and Mild Mental Diseases Belmont, Calif.	<b>FRANKLIN HOSPITAL</b> Limited General Hospital Fourteenth and Noe Streets, San Francisco	<b>SAN FRANCISCO HOME FOR INCURABLES, AGED AND SICK</b> 2750 Geary Street, San Francisco
<b>ALUM ROCK SANATORIUM</b> For Treatment of Tuberculosis San Jose, California	<b>GREENS' EYE HOSPITAL</b> Consultation, Diagnosis and Treatment of Diseases of the Eye Bush and Octavia Streets, San Francisco	<b>SANTA BARBARA CLINIC</b> 1421 State Street, Santa Barbara
<b>ANDERSON SANATORIUM</b> Mental and Nervous Diseases 2535 Twenty-fourth Avenue Oakland, Calif.	<b>JOHNSTON-WICKETT CLINIC</b> Anaheim, Calif.	<b>SCRIPPS METABOLIC CLINIC</b> <b>SCRIPPS MEMORIAL HOSPITAL</b> La Jolla, San Diego, Calif.
<b>BANNING SANATORIUM</b> Treatment of Tuberculosis and Throat Diseases Banning, Calif.	<b>JOSLIN'S SANATORIUM</b> Nervous and Mental Lincoln, Calif.	<b>SOUTHERN SIERRAS SANATORIUM</b> Scientific Treatment of Tuberculosis Banning, Calif.
<b>CALIFORNIA SANITARIUM</b> For the Treatment of Tuberculosis Belmont, San Mateo County, Calif.	<b>LIVERMORE SANITARIUM</b> Nervous and General Diseases Livermore, Calif.	<b>ST. JOSEPH'S HOSPITAL</b> Limited General Hospital Buena Vista and Park Hill Avenues San Francisco, Calif.
<b>CANYON SANATORIUM</b> For the Treatment of Tuberculosis Redwood City, Calif.	<b>MONROVIA CLINIC</b> Diagnosis and Treatment of Tuberculosis 137 N. Myrtle Street, Monrovia, Calif.	<b>ST. LUKE'S HOSPITAL</b> Limited General Hospital 27th and Valencia Streets, San Francisco
<b>CHILDREN'S HOSPITAL</b> General Hospital for Women and Children 3700 California Street, San Francisco, Calif.	<b>OAKS SANITARIUM</b> For the Treatment of Tuberculosis Los Gatos, Calif.	<b>ST. MARY'S HOSPITAL</b> General Hospital 2200 Hayes Street, San Francisco, Calif.
<b>COLFAX SCHOOL FOR THE TUBERCULOUS</b> For the Treatment of Tuberculosis Colfax, Calif.	<b>PARK SANITARIUM</b> Mental and Nervous, Alcoholic and Drug Addictions 1500 Page Street, San Francisco, Calif.	<b>SUTTER HOSPITAL</b> General Hospital 28th and L Streets, Sacramento, Calif.
<b>COMPTON SANITARIUM AND LAS CAMPANAS HOSPITAL, COMPTON</b> Neuropsychiatric and General	<b>POTTENGER SANATORIUM AND CLINIC</b> For the Treatment of Tuberculosis Monrovia, Calif.	<b>CHARLES B. TOWNS HOSPITAL</b> Alcoholism and Drug Addiction 293 Central Park West, New York, N. Y.
<b>DANTE SANATORIUM</b> Limited General Hospital Van Ness and Broadway, San Francisco	<b>RADIUM AND ONCOLOGIC INSTITUTE</b> Diagnosis and Treatment of Neoplastic Diseases 1052 West Sixth Street, Los Angeles, Calif.	<b>TWIN PINES</b> For Neuropsychiatric Patients Belmont, Calif.



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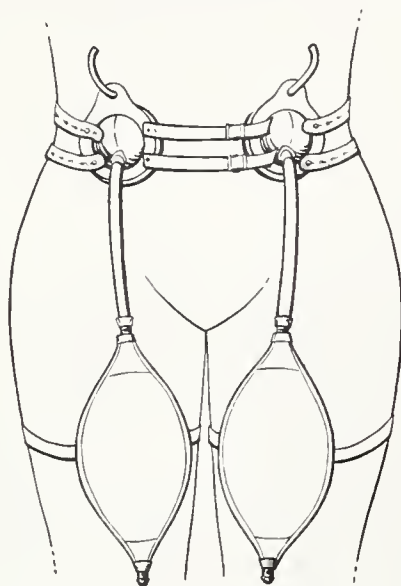
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## BOOK REVIEWS

List of Books Received

## BOOKS RECEIVED

**The Hebrew Physician.** By Moses Elnhorn, M. D., and L. M. Herbert, M. D., New York, Vol. 1, No. 2. Paper. Pp. 176. New York: The Trio Press, Inc.

**Proceedings of the Twenty-Third Annual Convention of the Association of Life Insurance Presidents.** Held in the Hotel Astor, New York, N. Y., December 12 and 13, 1929.

**Research and Medical Progress and Other Addresses.** By J. Shelton Horsley, M. D., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Virginia. Cloth. Pp. 208. Price, \$2. St. Louis: The C. V. Mosby Company, 1929.

**Nursing in Emergencies.** By Jacob K. Berman, A. B., M. D., F. A. C. S., Assistant in Surgery Indiana University School of Medicine. Cloth. Pp. 160, with 109 illustrations. Price, \$2.25. St. Louis: The C. V. Mosby Company, 1929.

**Hypertension and Nephritis.** By Arthur M. Fishberg, M. D., Adjunct Attending Physician to Mount Sinai and Montefiore Hospitals, New York City. Cloth. Pp. 566, illustrated with thirty-three engravings and one colored plate. Price, \$6.50 net. Philadelphia: Lea & Febiger, 1930.

**A Textbook of Physiology for Nurses.** By William Gay Christian, M. D., Professor of Anatomy, Medical College of Virginia, and Charles C. Haskell, B. A., M. D., Professor of Physiology and Pharmacology, Medical College of Virginia. Second edition. Cloth. Pp. 153. Price, \$2. St. Louis: The C. V. Mosby Company, 1929.

**The Mechanism of the Larynx.** By V. E. Negus, M. S., London, F. R. C. S., England, Junior Surgeon for Diseases of the Throat and Nose, King's College Hospital, London. With an Introduction by Sir Arthur Keith, F. R. S. Cloth. Pp. 528, with illustrations. Price, \$13.50. St. Louis: The C. V. Mosby Company, 1929.

**Essentials of Medical Electricity.** By Elkin P. Cumberbatch, M. A., B. M., (Oxon.), D. M. R. E., (Camb.), M. R. C. P., Medical Officer in Charge Electrical Department, St. Bartholomew's Hospital, University of Cambridge. Sixth edition, revised and enlarged. Cloth. Pp. 443, with eleven plates and 116 illustrations. Price, \$4.25. St. Louis: The C. V. Mosby Company, 1929.

**Getting Well and Staying Well.** A Book for Tuberculous Patients, Public Health Nurses, and Doctors. By John Potts, M. D., Forth Worth, Texas. Introduction by J. B. McKnight, M. D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium. Second edition. Cloth. Pp. 221. Price, \$2. St. Louis: The C. V. Mosby Company, 1930.

**Diseases Transmitted from Animals to Man.** By Thomas G. Hull, Chief Bacteriologist, Illinois Department of Public Health, Assistant Professor of Pathology and Bacteriology, University of Illinois College of Medicine. With an Introduction by Veranus A. Moore, Director, New York State Veterinary College, Cornell University. Cloth. Pp. 350, with twenty-nine illustrations. Price, \$5.50 postpaid. Springfield: Charles C. Thomas, 1930.

**The Essentials of Histology.** Descriptive and Practical for the use of Students. By Sir Edward Sharpey Schafer, F. R. S., Professor of Physiology in the University of Edinburgh. Twelfth edition, revised by the author, with the coöperation of H. M. Carleton, Ph. D., Lecturer on Histology in the University of Oxford. Cloth. Pp. 628, illustrated. Price, \$5 net. Philadelphia: Lea & Febiger, 1929.

**Symptoms of Visceral Disease.** A Study of the Vegetative Nervous System in Its Relationship to Clinical Medicine. By Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. Fourth edition. Cloth. Pp. 426, with eighty-seven text illustrations and ten color plates. Price, \$7.50. St. Louis: The C. V. Mosby Company, 1930.

**Recent Advances in Medicine.** Clinical Laboratory Therapeutics. By G. E. Beaumont, M. D., D. M. (Oxon.), F. R. C. P., D. P. H. (Lond.), physician, with charge of out-patients, Middlesex Hospital, and E. C. Dodds, M. V. O., M. D., Ph. D., B. Sc., M. R. C. P. (Lond.), Court-aud Professor of Biochemistry in the University of London. Fifth edition. Cloth. Pp. 442, with forty-nine illustrations. Price, \$3.50 net. Philadelphia: P. Blakiston's Son & Company, Inc., 1930.

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### BOOKS RECEIVED

(Continued from Preceding Page)

**A Textbook on Orthopedic Surgery.** By Willis C. Campbell, M.D., F. A. C. S., Professor of Orthopedic Surgery, University of Tennessee, College of Medicine, Memphis. Cloth. Octavo volume of 705 pages, with 507 illustrations. Price, \$8.50. Philadelphia: W. B. Saunders Company, 1930.

**Treatment in General Practice.** By Harry Beckman, M.D., Professor of Pharmacology, Marquette University Medical School, Milwaukee, Wisconsin. Cloth. Octavo volume of 899 pages. Price, \$10 net. Philadelphia: W. B. Saunders Company, 1930.

### BOOK REVIEWS

**The History of Nursing.** By James J. Walsh. Pp. 293. New York: P. J. Kenedy & Sons, 1929. Price, \$2.

It would seem a beautiful tribute to the age-old art of nursing that the author of this history, after many years of research and writing on the history of hospitals and medicine, should in the evening of his life cull from these writings and compile a history of nursing. In the fascinating and simple style which has characterized the works of Doctor Walsh, he takes the reader far back in history, even to the beginning of the Christian period, and shows that nursing in one form or another has always been existent and as much a part of civilization as religion or the art of medicine.

In his opening paragraph Doctor Walsh introduces the foundation ideal upon which has been built the structure of nursing, namely, the brotherhood of man—the great human motive which has actuated nurses through the vicissitudes of ages, through the rise and fall of civilizations and up to the era of so-called modern nursing; modern only in the sense that it is a part of evolution.

This is more than a historical tracing of nursing; it is a picture of the care of the sick, the poor and the outcast, as it has been followed through the centuries from the time of Christ until "the industrial revolution which introduced the so-called era of prosperity and brought a change in the status of populations." It is also a history of hospitals; nursing history can never be separated from that of hospitals, in studying one we study the other.

In the chapter on medieval surgery and nursing is shown the development of this great era of surgery and the fact that there must have been good nurses, "for otherwise surgeons would not have been able to accomplish the surgical interventions which they actually did." Doctor Walsh, always an admirer of the thirteenth century, writes: "The supreme development in hospitals and nursing came during the thirteenth century." Who has not read his "The Thirteenth, Greatest of Centuries" has a treat in store.

The history of nursing in America begins about half-way in the book with a short mention of its early condition which even the author dismisses with the words "the less said about nursing the better." He picks up the thread after the introduction of the Nightingale nurses in Bellevue in 1872, when so-called modern nursing came from England through the influence of Dr. Valentine Seaman at the New York Hospital. He follows it through its difficult way opposed continually and often by physicians for whom it was the greatest assistance. He is frank in showing the reasons for the decadence of hospitals and the consequent lowered standard of nursing which did not improve until Lister's contribution to surgery and the introduction of the training of nurses. In this day, when we are so deeply concerned with the functioning of hospitals, it is refreshing to read of Virchow's discussion on hospitals and his desire to have these "true humanitarian institutions" which they were not at that time in Germany. Although Virchow was not a religious man "he appreciated how much the maintenance of nursing efficiency might be helped by the motives which come from the religious life." The development of sisters' hospitals in the United States is most interestingly shown together with the advance of the schools of nursing in these institutions. Mercy Hospital, Chicago, and St. Mary's Hospital, Rochester, Minnesota, both noted as the scene of great progression in surgery are likewise important in the education of nurses.

Like the true historian, Doctor Walsh enjoys to dwell on the past, and in this book he dismisses the present with somewhat scant mention. Reading his book one feels a sense of disappointment that he devoted such short space to the stirring events in the past decade of

nursing progress about which there is so much to be recorded. In his concluding chapter he gives mention to the part nursing has had and will continue to have in the control of communicable diseases. "The progress of medicine, instead of lessening the demand for nurses in the hospitals, is increasing it all of the time and will continue to increase it for years to come." Doctor Walsh with keen perception visualizes the need of part-time nursing, such as visiting nursing, hourly and group nursing in this present stage of our economic development. He is even sufficiently modern as to advocate a day consisting of eight hours of work, eight hours of recreation, and eight hours of sleep as carrying out "the old rule of good King Alfred."

In this last chapter he brings forth some good ideas on providing nursing service for country towns and farming districts.

Doctor Walsh has not written solely for nurses. This is a fascinating narrative of the history of hospitals as well as of nursing, and will interest physicians and their patients as well as nurses. While it establishes the background of what is termed "the youngest profession," it likewise shows its close relation to medicine as it progressed and retrograded through the centuries to the present time; it may well encourage us in dealing with some of the difficulties with which we are today contending.

A. C. J.

**A Surgical Diagnosis.** By J. Lewi Donhauser. Pp. 797. Illustrated. New York and London: D. Appleton and Company, 1929.

This book is written essentially for medical students and hospital interns. The author covers the etiology, signs, symptoms, and differential diagnosis of all the

(Continued on Page 16)



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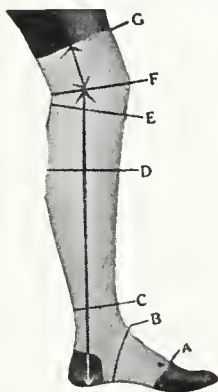
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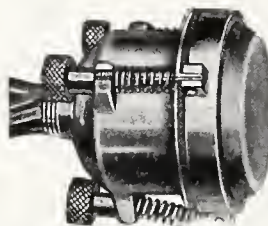
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## BOOK REVIEWS

(Continued from Page 12)

surgical conditions from the infections through all the diseases of the various systems. The data are arranged as an outline and numerous charts are used throughout the text.

For the most part the definitions are exceptionally good, otherwise the book contains nothing remarkable for the practicing surgeon. However, it does fulfil its purpose as a guide to surgical diagnosis for the beginner.

L. R. C.

**Clinical Medicine for Nurses.** By Paul H. Ringer. Pp. 330. Illustrated. Third edition. Philadelphia: F. A. Davis Company, 1929. Price, \$3.

Clearness and avoidance of unnecessary details are the main essentials in the teaching of nurses, who are usually overburdened with much knowledge to be absorbed in a short time. "Clinical Medicine for Nurses" certainly meets this need.

As the title implies, it is clinical medicine, not an exhaustive textbook, and a book of this size cannot cover every disease which the nurse may have to deal with. Nothing essential has been omitted and those diseases in which the nursing care is of paramount importance—typhoid, diphtheria, and rheumatic fever—have been fully discussed.

The sections on treatment of each disease are up to date, and enough pathology and symptomatology have been included to allow the nurse to meet each case with a clear idea of what she can do to further the comfort and recovery of the patient.

H. M. D.

**The Nose, Throat, and Ear and Their Diseases.** In original contributions by American and European authors. Edited by Chevalier Jackson and George Morrison Coates, assisted by Chevalier L. Jackson. Pp. 1177. Illustrated. Philadelphia and London: W. B. Saunders Company, 1929. Price, \$13.

A valuable book for laryngologists and those who have had special training in otolaryngology. It is entirely too massive and lengthy to allow its recommendation as a text for medical students.

The volume itself is a collection of essays, some of which closely assume the cloak of a monograph, contributed by men especially selected to present the subject-matter of their respective chapters. The weakness of collected writings of various authors, namely, lack of continuity and lack of uniformity in diagnosis and treatment of allied or closely allied pathology, although present

in this volume is not as distressingly evident as has been the case heretofore.

The volume is rich in illustrations of excellent selection and quality. In some instances the list of reference material is scant, in others rather extensive, depending somewhat upon the reaction of the individual contributor. The index is complete, logical and workable.

In general the articles are at once lucid, concise, and up to date, and the work as a whole forms a worthy volume of otorhinolaryngology.

L. F. M.

**William Harvey.** By Archibald Malloch. Illustrated. New York: Paul B. Hoeber, 1929. Price, \$1.50.

A deeply interesting and very human, as well as an unusually authoritative life of William Harvey, whose master work on the movements of the heart and blood was written just three hundred and three years ago, has come from the pen of Dr. Archibald Malloch, the distinguished librarian of the New York Academy of Medicine. His "William Harvey" is made doubly interesting with thirteen admirably reproduced illustrations of contemporary documents and portraits. Knowing Doctor Malloch personally, I am not surprised to find a graphic quality in this brief biography which is a salient feature of the man's conversation. Doctor Malloch, in a hundred pages, gives a better picture of the man and his work than most biographers would in ten times that space. He shows us Harvey as one of the first defenders of vivisection, as a vigorous opponent to the witchcraft and quackery of that day (1578-1657), writes entertainingly of Harvey's personal eccentricities, and mentions some of his early dissections performed under the direction of Fabricius by candlelight. In a word, the book is well worth buying.

E. L. G.

**Imperative Traumatic Surgery With Special Reference to After-Care and Prognosis.** By C. R. G. Forrester. Pp. 464. Illustrated. New York: Paul B. Hoeber, 1929. Price, \$10.

The text, illustrations, and index of this book cover four hundred and sixty-four pages. It is written in a well organized form, and the author has attempted to give a standard treatment for the more common injuries. The book is written from the practical standpoint throughout. The methods of the author, after a rich experience of twenty-six years in industrial practice, are given in detail and no attempt is made to cover all the methods in use for treating different injuries.

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(Continued on Page 18)



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### BOOK REVIEWS

(Continued from Page 16)

There are five hundred and ninety-eight illustrations, all of which have some practical value. The author has attempted to give a practical and efficient type of treatment for all of the more common industrial injuries, and to this end the reviewer feels that he has succeeded. The subject-matter and illustrations are worthy of attention from anyone doing industrial surgery. L. B.

**An Introduction to the Study of Physic.** (Now for the first time published.) By William Heberden. A prefatory essay by LeRoy Crummer, with a reprint of Heberden's, some account of a disorder of the breast. Pp. 159. Illustrated. New York: Paul B. Hoeber, Inc., 1929. Price, \$2.

One can say nothing except in praise of Doctor Crummer's delightful essay on Heberden. The discovery of a previously unknown work by an old master and the reproduction of it in pleasing form are obviously matters of importance to all medical bibliophiles. The "Introduction to the Study of Physic" is itself replete with interest and can be read with profit today by every medical student and teacher. A. L. B.

**A Diabetic Manual for the Mutual Use of Doctor and Patient.** Fourth edition. Illustrated. Pp. 248. Philadelphia: Lea and Febiger, 1929. Price, \$2.

Successive editions have registered progress in diabetes, education of the patient, prevention of diabetes by avoidance of obesity, more recently the proper use of insulin. This book deservedly continues to lead the procession of handbooks. It excels in its credit to other students, in its consideration of the views of others, in its thorough reliability and soundness, in its incessant improvements in each edition, in its lively illustrations (especially the little girl on page 114 giving herself an injection of insulin), in its presentation of the normal diet in simple and orthodox lines following evidence of authorities such as Benedict, Chittenden, DuBois, Holt, Lusk, Mendel, Osborne, McCollum, and Simmonds. Diabetic diets are set forth simply in some places for beginners, and more in detail in other places for patients who have learned the absolute essentials and wish to know more in order to obtain variety. The questions and answers are simple, important, and reveal the actual questions raised by patients.

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This manual has no equal, either for the practitioner to have on hand for reference, or for him to recommend to his patients.

H. G.

**Bodily Changes in Pain, Hunger, Fear, and Rage—An Account of Recent Researches into the Function of Emotional Excitement.** By Walter B. Cannon. Second edition. Pp. 404. Illustrated. New York and London: D. Appleton and Company, 1929. Price, \$3.

The book is fundamentally an exposition of the sympathetico-adrenal system, in which the author "has tried to eliminate or incidentally explain technical terms so that the exposition will be easily understood by any intelligent reader even though not trained in the medical sciences."

In times of stress "purposive automatisms," having the nature of reflexes, with the center located in the optic thalamus, are brought into play; typical reaction patterns "nicely adopted to the welfare and preservation" of the animal at such times, tapping the "reservoirs of power," causing suspension of alimentary function, mobilization of sugar for energy, offsetting of fatigue, increasing blood pressure, hastening of the coagulation time of blood, increasing number of red cells in circulation, etc.; all very well summarized in Chapter Twelve, a chapter well worth reading for the person who wants in brief the present knowledge of the sympathetico-adrenal system, and then of interest to the clinician the practical application of this knowledge in Chapter Fourteen.

The latter part of the book deals with the physiology of hunger, thirst, and the center of the emotions in the optic thalamus, and finally, briefly, the philosophy of the emotions.

Finally, it should be added, that this book affords the layman an insight into the methods and intricacies of medical research in a lucid manner, being of especial value in this day of exaggerated claims by quacks and charlatans.

B. S.

(Continued on Page 23)



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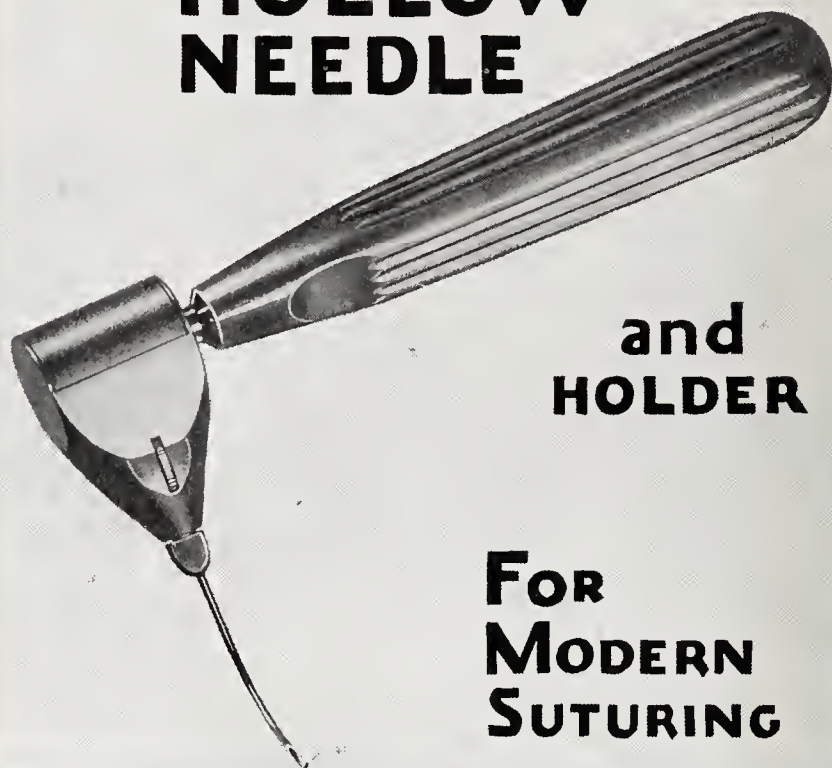
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## BOOK REVIEWS

(Continued from Page 19)

**Pathogenic Microorganisms—A Practical Manual for Students, Physicians, and Health Officers.** By William Hallock Park, Anna Wessels Williams, and Charles Krumwiede. Ninth edition. Pp. 819. Illustrated. Philadelphia: Lea and Febiger, 1929.

This recently revised book, which is an accepted standard text of bacteriology, requires neither introduction nor criticism.

Attention is drawn to the more important changes which are the additions of newer knowledge of scarlet fever, yellow fever, tularemia, and undulant fever. Details of the new precipitin tests, staining reactions, and cultural methods are given in full. The chapter on pneumonia includes the new classification of pneumococci.

The bibliography has been enlarged to include the additional sources of information.

The general arrangement and presentation of the material, except for minor changes, and the illustrations, are the same as found in the eighth edition.

It is a valuable book for the medical practitioner, laboratory worker, and student.

E. M. B.

**Indigent May Have Their Own Physicians.**—A new plan to provide medical care for the indigent of a progressive county in another state recently became effective under a contract signed by the county medical society and the county board of supervisors. By this plan an indigent person may select his own physician from the members of the county society. The supervisors pay the society a total of \$3500 for caring for the sick poor one year, and the society, in turn, pays the individual member in accordance with the amount of work which he did. Calls for medical aid must come first through the supervisors. Under the old system, three physicians were given all of the so-called pauper practice.—*The Health Messenger* (Seattle).

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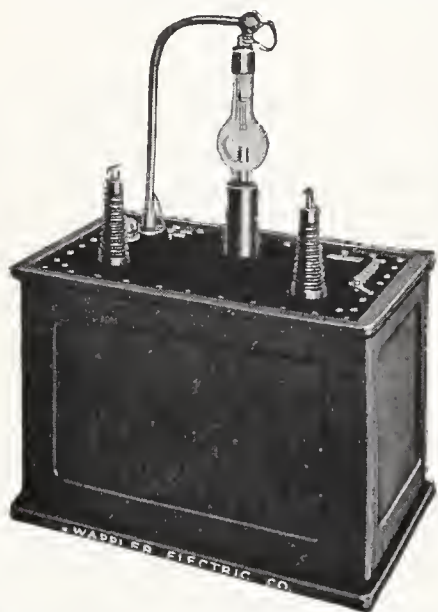
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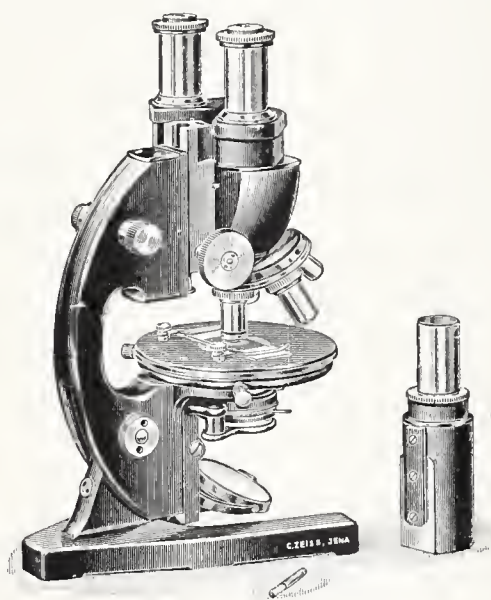
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## TRUTH ABOUT MEDICINES

### New and Nonofficial Remedies

(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

In addition to the articles previously enumerated, the following have been accepted:

**Abbott Laboratories.**—Butesin Picrate Eye Ointment.

**Lakeside Laboratories, Inc.**—Ampoules Dextrose (d-Glucose) 10 grams, 20 cubic centimeters; ampoule No. 51, Sodium Cacodylate 0.243 gram ( $3\frac{3}{4}$  grains), five cubic centimeters.

**H. K. Mulford Co.**—Pneumococcus Antibody Solution, Types I, II, and III, Combined (Mulford), four 50 cubic centimeter double-ended vials.

The following articles have been exempted and included with the List of Exempted Medicinal Articles (New and Nonofficial Remedies, 1929, p. 481):

**Davies, Rose & Co., Ltd.**—Pil. Digitalis (Davies, Rose).

**Kings County Packing Co.**—Sac-A-Rin Brand California Bartlett Pears; Sac-A-Rin Brand California Tidbits Hawaiian Pineapple; Sac-A-Rin Brand California Royal Anne Cherries.

**Lakeside Laboratories, Inc.**—Ampoule No. 64 Calcium Chlorid 10 per cent.

**Diphtheria Toxoid (National).**—A diphtheria toxoid (New and Nonofficial Remedies, 1929, p. 368), prepared from seven-day cultures of the diphtheria bacillus that yield a toxin having an L plus dose of not less than 0.25 cubic centimeter. The toxin is treated with formaldehyd. The finished product is tested for antigenic potency. The product is marketed in packages of three vials (one immunization treatment); in

(Continued on Page 28)



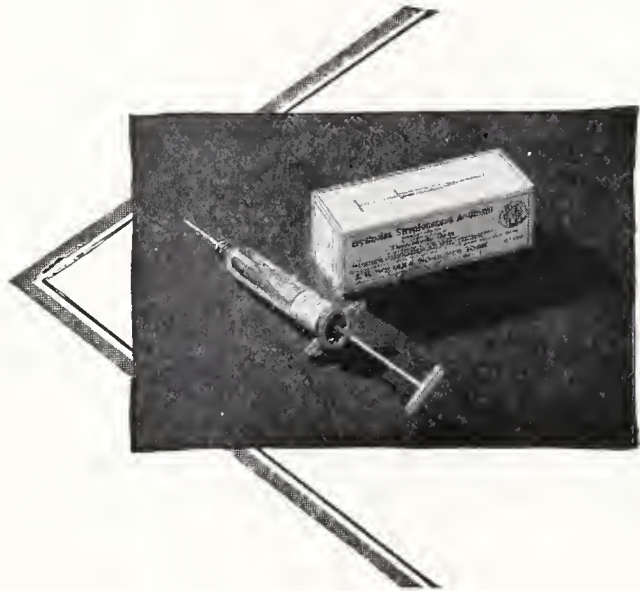
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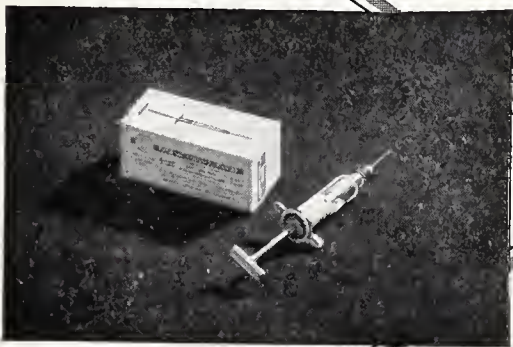


## Tetanus Antitoxin Squibb

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## TRUTH ABOUT MEDICINES

(Continued from Page 26)

packages of one vial (fifteen immunization treatments); in packages of forty-five vials (fifteen immunization treatments). The National Drug Co., Philadelphia.

**Scarlet Fever Streptococcus Antitoxin (Cutter).**—A scarlet fever streptococcus antitoxin (New and Nonofficial Remedies, 1929, p. 350), prepared by the method of Doctors Dick by license of the Scarlet Fever Committee, Inc. It is marketed in packages of one syringe containing 2000 units, and in packages of one syringe containing 6000 units. Cutter Laboratory, Berkeley, California.

**Typho-Bacterin Mixed (Triple Vaccine TAB).**—This product (New and Nonofficial Remedies, 1929, p. 380), is also marketed in packages of thirty one cubic centimeter vials, being ten immunizations of three doses each. H. K. Mulford Company, Philadelphia.—*Jour. A. M. A.*, January 4, 1930, p. 31.

**Ampoules Sodium Cacodylate (Mulford), Three-Fourths Grain, One Cubic Centimeter.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1929, p. 73), 0.05 gram ( $\frac{3}{4}$  grain) in one cubic centimeter of sterile solution, with one per cent of benzyl alcohol. H. K. Mulford Company, Philadelphia.

**Ampoules Sodium Cacodylate (Mulford), Three Grains, One Cubic Centimeter.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1929, p. 73), 0.2 gram (three grains) in one cubic centimeter of sterile solution, with one per cent of benzyl alcohol. H. K. Mulford Company, Philadelphia.

**Ampoules Sodium Cacodylate (Mulford), Five Grains, One Cubic Centimeter.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1929, p. 73), 0.32 gram (five grains) in one cubic centimeter of sterile solution, with one per cent of benzyl alcohol. H. K. Mulford Co., Philadelphia.

(Continued on Page 30)



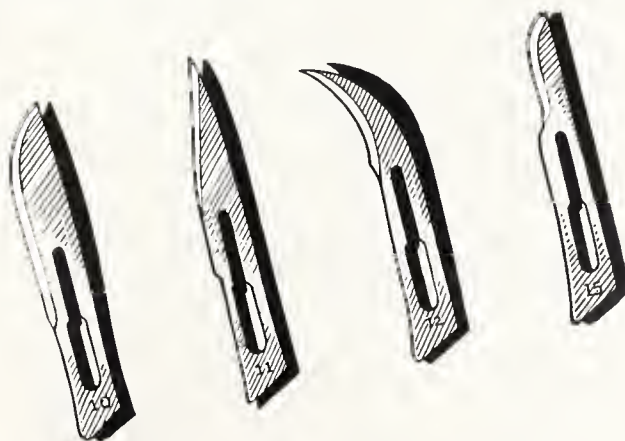
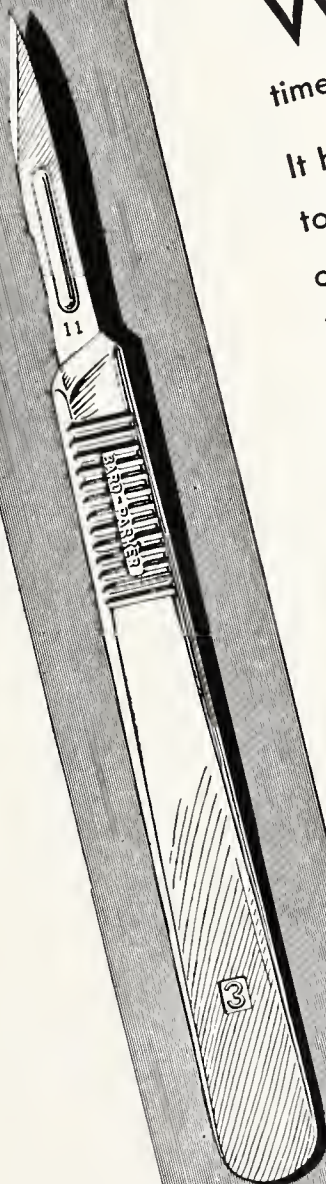
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## TRUTH ABOUT MEDICINES

(Continued from Page 28)

**Erysipelas Streptococcus Antitoxin—Concentrated (Mulford).**—This product (New and Nonofficial Remedies, 1929, p. 349), is also marketed in packages of one 10 cubic centimeters syringe containing 500,000 protective units. H. K. Mulford Company, Philadelphia.—*Jour. A. M. A.*, January 11, 1930, p. 105.


**Curdolac Casein-Bran Improved Flour.**—A flour prepared from casein, carbohydrate-free bran, and soya bean, to which leavening and flavoring have been added. It may be used for the preparation of muffins or bread having a comparatively low carbohydrate content and low food value, with bulk. Curdolac Food Company, Waukesha, Wisconsin.

**Curdolac Soya-Bran Flour.**—A flour prepared from soya bean and a starch-free bran with a leavening mixture. It may be used for the preparation of bread and muffins for use in diets in which a comparatively low carbohydrate content is desired. Curdolac Food Company, Waukesha, Wisconsin.


**Curdolac Breakfast Cereal.**—A medicinal food prepared from soya beans blended with wheat products, including starch-free bran. It may be used as a hot food in diets in which a comparatively low carbohydrate content is desired. Curdolac Food Company, Waukesha, Wisconsin.

**Curdolac Casein Compound.**—A flour prepared from casein, vegetable fiber, and a leavening mixture to which sodium chlorid and gluside are added. It may be used for the preparation of carbohydrate-free bread, muffins, cake, etc., for use in diets in which a relatively low carbohydrate content is desired. Curdolac Food Company, Waukesha, Wisconsin.

**Curdolac Soya Flour.**—A flour prepared from the soya bean. It may be used for the preparation of foods in diets in which a relatively low carbohydrate content is desired. Curdolac Food Company, Waukesha, Wisconsin.



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**Curdolac Soya-Cereal Johnny Cake Flour.**—A flour prepared from soya beans and cereal products to which leavening and flavoring have been added. It may be used in the preparation of muffins, cakes, waffles, etc., for use in diets relatively low in carbohydrates, designed for those who cannot use products made with bran. Curdolac Food Company, Waukesha, Wisconsin.

**Curdolac Soya-Bran Breakfast Food.**—A medicinal food prepared from soya beans and a starch-free bran, to which has been added leavening, flavoring, gluside, and oils without food value. It may be used in diets in which a low carbohydrate content is desired. Curdolac Food Company, Waukesha, Wisconsin.—*Jour. A. M. A.*, January 18, 1930, p. 185.

### PROPAGANDA FOR REFORM

Ampoule No. 61 Sodium Salicylate 15½ Grains, Ampoule No. 59 Sodium Iodid 15½ Grains, Ampoule No. 66X Sodium Salicylate, Sodium Iodid 15½ Grains Each, Ampoule No. 66 Sodium Salicylate, Sodium Iodid and Colchicin, and Ampoule No. 50 Iron and Arsenic (Iron Cacodylate) One Grain—Not Acceptable for New and Nonofficial Remedies.—The Council on Pharmacy and Chemistry reports that these are included in the list of ampoules for intravenous use marketed by the Lakeside Laboratories, Inc., Milwaukee. In 1921, in reporting on "Some of Loeser's Intravenous Solutions," the Council stated the objections to the intravenous administration of sodium salicylate and sodium iodid and of mixtures of drugs in fixed proportions. Since this time no evidence in favor of the routine intravenous administration of

(Continued on Page 37)



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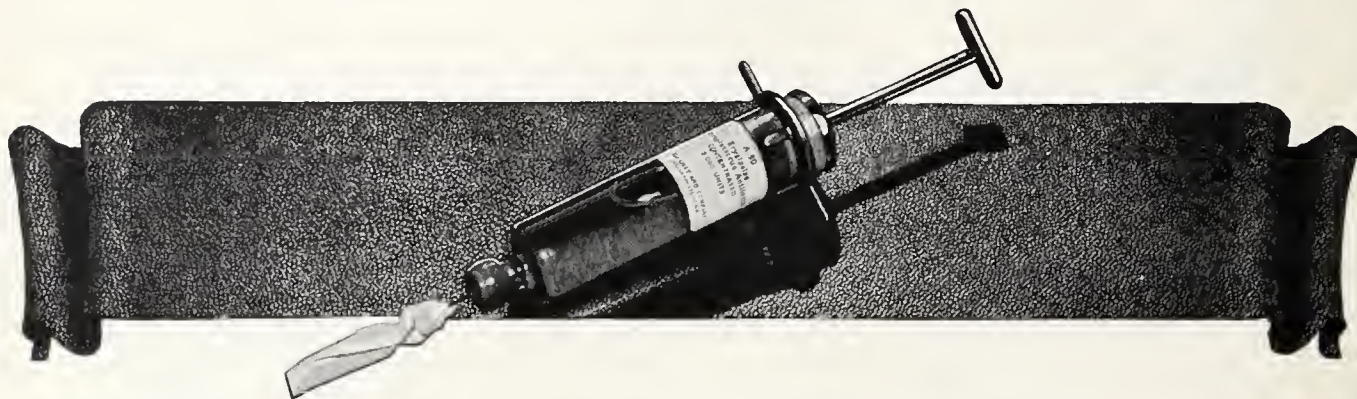
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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXXII

MARCH, 1930

No. 3

## ASCHHEIM-ZONDEK TEST FOR PREGNANCY—ITS PRESENT STATUS\*

By HERBERT M. EVANS, M. D.  
AND  
MIRIAM E. SIMPSON, M. D.  
*Berkeley*

IN 1926 Bernard Zondek and, almost immediately thereafter, our former associate, P. E. Smith, discovered that the implantation of small bits of the anterior lobe of the hypophysis would provoke sexual maturity in immature animals. When the animals are taken on the day of weaning, these remarkable changes can be produced within four days. A simple chain of reasoning led S. Aschheim, an associate of Zondek, to discover that the same chemical substance which in hypophyseal implants so rapidly matures animals is unusually abundant in the body fluids (blood and urine) during pregnancy. It has been known since the classical work of Erdheim and Stumme that the anterior hypophysis hypertrophies in pregnancy. Zondek had just previously shown that the ovarian substance, folliculin, occurs in high concentration in the body fluids of pregnancy. It was therefore natural to inquire whether the new hypophyseal hormone was not also similarly abundant in pregnancy. Their positive findings were quickly extended by the Berlin investigators and now constitute perhaps the most reliable known test for pregnancy and the only reliable early test.

### TEST WORTHY OF USE IN GENERAL PRACTICE

It seems remarkable that the medical profession of this country has not made wider use of the Aschheim-Zondek test for pregnancy. This is the justification offered for a survey of the present status of the test. An attempt will be made to discuss briefly both the technique of the test as used by the discoverers and by others, the accuracy or dependability of the test and the sphere in which the test is useful.

### TECHNIQUE

As used by Aschheim and Zondek<sup>1-10</sup> the test is performed as outlined below.

The morning urine is sent into the laboratory in clean bottles. They recommend the addition of one drop of tricresol per 25 cubic centimeters of urine if it is necessary for the sample to be sent by mail. A group of five mice, each weighing six to eight grams, is used to test each urine specimen. The total volume of urine injected into each mouse varies from 1.2 to 2.4 cubic centimeters. This total dosage is distributed in six doses during forty-eight hours. It is administered subcutaneously in increasing amounts of 0.2 to 0.4

cubic centimeters each. On the fifth day, *i. e.*, ninety-six to one hundred hours after injections are begun, the animals are autopsied and the genital system is examined, preferably with a hand lens or binocular microscope. The ovaries of untreated animals of this age are always very small smooth glandules, containing, at most, small follicles. In case the ovaries show further development, the type of reaction can be classified as follows, according to Aschheim and Zondek:

Reaction I—Enlarged follicles.

Reaction II—Hemorrhagic follicles—"blood points."

Reaction III—Corpora lutea.

### COMMENTS ON REACTIONS AND TECHNIQUE

The presence of Reaction II or III, or both, is an almost certain indication of the presence of the anterior hypophyseal sex hormone in the urine, characteristic of pregnancy in the case of human beings. The reaction is considered positive if only *one* hemorrhagic follicle or *one* corpus luteum is observed in one experimental animal, that is, if either Reaction II or III, or both, are present in any one of the five animals used for the test for pregnancy. However, if Reaction I is given and the animals show evidence of heat (cornification of the vagina and enlarged uterus), the test is repeated with a second sample of urine.

If there is urgent reason to get results in an interval shorter than five days, the Berlin investigators increase the number of experimental animals used in the test and autopsy them in sixty to seventy hours. By this method they cut down the inaccuracy introduced by the variability in reaction of individual mice, and feel they can reach fairly accurate conclusions. The ovaries are studied in serial section if for any reason the macroscopic findings are dubious.

The modifications in technique introduced by other workers have not been numerous; most workers have adhered closely to the conditions of the test as prescribed by the discoverers. Kraus<sup>14</sup> of Prague shortens the test somewhat by autopsying on the fourth day and examining the ovaries in glycerin under the microscope. He believes he can recognize the development of hemorrhagic follicles and corpora lutea at an earlier stage by this method than by macroscopic observation.

Some workers, *e. g.* Mayer<sup>35</sup> and Vogt<sup>22</sup> do not trust macroscopic findings, but always study stained serial sections.

### METHOD USED AT UNIVERSITY OF CALIFORNIA

In the laboratory at Berkeley, sexually immature rats have been substituted for mice with satisfactory results. The test as performed is as follows: The morning urine is neutralized, fil-

\* From the Anatomical Laboratory of the University of California.

tered and, during the test, stored below 0 degrees C. so as to be actually frozen. Six rats, twenty-four to twenty-six days of age, weighing forty to fifty grams, are injected to test each urine. Each rat receives a subcutaneous dose of one cubic centimeter daily for four days (Monday, Tuesday, Wednesday, Thursday). The animals are autopsied ninety-six hours after beginning the injection (Friday). The ovaries are examined under binoculars, eventually dissected free from the oviducts, and weighed. If observations are made by immediately swinging the binoculars over the opened body of the animal with the ovaries *in situ* and only the bursa ovarica opened but the blood supply left intact, then the detection of corpora lutea is much facilitated. The positive test for pregnancy in the rat is the presence of corpora lutea—Zondek's Reaction III. Hemorrhagic follicles, Reaction II, are not common in the ovaries of precociously matured rats. Though the expense of maintenance of a rat colony is greater than that of a mouse colony, and rats would not have been used except that our colony was established, use of the rat has, however, one advantage. Rats are sturdier than mice. Zondek and Aschheim have 15 per cent mortality among their urine-injected test animals. So far we have lost no animals from use in the test.

#### ACCURACY OF THE TEST

The error involved in the Aschheim-Zondek pregnancy test is small enough to admit the test as a most important diagnostic aid. Twenty-four groups of workers and over three thousand tests are cited in Table 1. In almost no cases did the error exceed two per cent; in fact the majority of workers have found the error to lie between one and two per cent.

TABLE 1.—Accuracy of the Aschheim-Zondek Pregnancy Test

Investigator	Number of Cases	Percentage Error
Aschheim and Zondek, <sup>1-10</sup> Berlin.....	1000	1.2
K. Ehrhardt, <sup>11</sup> Frankfurt.....	400	2.
E. Solms and E. Klopstock, <sup>12</sup> Berlin.....	349	1.
F. Wermbter and E. Schultze, <sup>13</sup> Wien....	30	
E. J. Kraus, <sup>14</sup> Prag.....		0
Brühl, <sup>15</sup> Göttingen.....	192	{ 0 preg- nancy cases 3.75 non- pregnancy cases
Martius, <sup>16</sup> Göttingen.....	51	{ 1.2 Preg- nancy cases 0 non- pregnancy cases
Praude, <sup>17</sup> Moscow.....	100	
Brouha and Simmonet, <sup>18</sup> Paris.....	30	
Odeschati, <sup>19</sup> Italy.....		
Louria and Rosenzweig, <sup>20</sup> New York.....	86	1
H. E. Kaplan, <sup>21</sup> Stockton.....		
Siecke, <sup>24</sup> Kiel.....	51	0
Füth, <sup>25</sup> Köln.....	139	1
Hornung, <sup>26</sup> Berlin.....		2
Kriele, <sup>27</sup> Berlin-Neukölln.....	12	8
Schmidt, <sup>28</sup> Düsseldorf.....	171	0
Pankow, <sup>29</sup> Freiburg.....		{ 0 in normal pregnancy
Gragert and Wittig, <sup>30</sup> Greifswald.....	46	0
Kehrer, <sup>31</sup> Marburg.....	97	1
Karg, <sup>32</sup> München.....	110	1
Esch, <sup>33</sup> Münster Westf.....	49	{ 0 except tubal pregnancy
Hellmuth, <sup>34</sup> Würzburg.....	36	{ 0 except tubal pregnancy
Total number of cases.....	3088	

All investigators who have applied the test have found it a reliable criterion for normal uncomplicated pregnancy. Many wish to say the test yields 100 per cent results in all normal cases, where applied after one or more missed menstruations. Several workers have noted a positive test seven to eight days, and one only three days after the first missed menstruation. Zondek cites two cases of young women who were tested before a menstruation had been missed. The test was negative for pregnancy, only large follicles were found in the ovaries of the test animals (Reaction I). When retested four to five days after the expected menstruation, the reaction was positive (II and III). Zondek's rationalization is that implantation must occur before the test becomes positive. The test continues to be positive throughout the remainder of pregnancy and persists to the seventh day of the puerperium. Zondek reports the test to be negative on the eighth day.

The errors recorded in the table are attributable to relatively few causes. The test is strongly positive in cases of hydatid mole, and remains so after removal of hydatid mole if only small fragments are left. Chorio-epithelioma also gives a positive reaction.

A few instances of inaccuracy have been reported in cases of tubal implantation. A positive test seems to be almost coincident with the persistence of life of the fetus, a point emphasized by Radtke<sup>36</sup> and others. Instances of a negative test, in cases later proved to be tubal pregnancies, were probably due to death of the fetus before the time of the test. Esch,<sup>33</sup> however, cites a case of tubal rupture in which a positive Aschheim-Zondek test was obtained two days after the fetus was expelled into the peritoneal cavity. In Schmidt's<sup>28</sup> experience the reaction in tubal pregnancy has always been positive except in two cases of old hematoceles.

In cases of abortion, positive results have been reported to occur as late as the sixth to the eighth day after abortion. The test has hence important medico-legal value. It is probable that the results from the test in cases of abortion and partial abortion depend, just as in tubal pregnancy, on the time of death of the ovum or fetus with respect to the time of the test.

Tests have been reported where large follicles (Reaction I) were found after the injection of urine from nonpregnant women in whom carcinoma was present, but such a finding should not be counted among the errors of the method, as a pregnancy diagnosis is never based on Reaction I.

No conditions save pregnancy and its associated phenomena have given Reactions II and III, and among the conditions which have been investigated have been uterine myoma, carcinoma of the body of the uterus, tumor of the adnexa, cystoma, x-ray amenorrhea, unexplained amenorrhea, hypophyseal tumor, and acromegaly.

In summary of the accuracy of the test it can therefore be said: A positive Aschheim-Zondek test is not only given by pregnancy but by hydatid mole and by chorio-epithelioma. A negative test is an almost certain indication of the absence of



pregnancy, at least of pregnancy of longer duration than one month.

#### IMPORTANCE OF THE TEST—THE APPLICATIONS

Of first importance in the applications of the Aschheim-Zondek test is the early diagnosis of pregnancy—before clinical signs are available or dependable. This is not the only clear indication for the test.

Of next importance is the use of the test in the differential diagnosis of cases in which pregnancy is simulated; for instance, the differential diagnosis between cystic myoma and pregnancy as cited by Wagner.<sup>23</sup> Clinically this case simulated pregnancy. After opening the peritoneal cavity the enlarged uterus was not distinguishable from a normal pregnant uterus. Even when the mass was incised a bag of fluid was encountered similar in appearance to fluid-filled fetal membranes. The uterus was removed, however, because of two clearly negative Aschheim-Zondek tests which had previously been performed. Section of the uterine mass showed a cystic softened myoma.

The test has been suggested as an aid in the detection of the death of the fetus, but the results, at least those reported by Esch,<sup>33</sup> do not confirm this hope. He finds too great a lag after the death of the fetus to make the test valuable. In one case of a seven-month pregnancy reported by him, the heart of the fetus was not audible. For this reason they believed the fetus to be dead. Ten days after this observation the Aschheim-Zondek test was positive. Four days later a macerated fetus was expelled. In another case of incomplete abortion the test was positive eight days after expulsion of the products of gestation. Schmidt<sup>28</sup> describes a rapid disappearance of the test after spontaneous abortion of a fetus dead from syphilitic or renal disease in the mother, but by rapid disappearance he means a negative reaction six days after abortion.

The test promises to be of importance in the diagnosis of hydatid mole and chorio-epithelioma. In cases where the test remains positive too far into the puerperium (*i. e.*, after seven days) or too long after abortion (*i. e.*, after six days), these pathological conditions need to be remembered. Zondek, Aschheim, Wagner,<sup>23</sup> and others emphasize the importance of following patients in whom hydatid moles have been removed by frequent tests as a check on the completeness of removal. Wagner and others find that repeated positive tests after removal of a hydatid mole, though indicating the need of very careful study, do not necessarily indicate the development of a chorio-epithelioma. If, however, the test becomes positive after an interval of negative tests—and pregnancy can be excluded—then the development of chorio-epithelioma is likely.

The fact that the urine from cases having a hydatid mole is so much more potent in anterior hypophyseal sex hormone than urine from cases of normal pregnancy suggests the minimum dose method as of possible aid in distinguishing between normal pregnancy and this condition. Only

one-tenth the usual dosage is required to give a positive test in cases of hydatid mole.

Just as the Aschheim-Zondek test is of aid in the differential diagnosis of pregnancy, so also it is of aid in the exclusion of pregnancy in the study of amenorrheas. The test has been found negative in each of one hundred and fifty-one cases of amenorrhea studied in the Charité-Frauenklinik, Berlin. As an instance of such use of the test a case will be cited from Zondek's discussion of hyperhormonal and oligohormonal amenorrheas. In some amenorrheas, hyperhormonal, the urine is characterized by large amounts of *folliculin*, but not of the hypophyseal hormone. Some of these cases have cystic follicles in the ovary. In the latter case the condition can be improved by expression of the cyst. Folliculin is excreted in increased amounts in the amenorrhea of pregnancy as well as in these peculiar amenorrheas of nonpregnant women. In the study of such a case, therefore, one would wish to be entirely sure of the absence of pregnancy by the use of the Aschheim-Zondek test.

#### SUMMARY\*

1. The Aschheim-Zondek test is remarkably dependable in cases of normal pregnancy.
2. It is positive a few days after the first missed period.
3. The test is useful in differential diagnosis of pregnancy from other amenorrheas, tumors of the uterus, etc.
4. There is also a distinct province for the test in the diagnosis of hydatid mole and chorio-epithelioma.

Anatomical Laboratory, University of California.

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\* It is to be hoped that the present summary will encourage routine use of the new test and that the technique of its performance is described with sufficient detail to encourage any diagnostic laboratory to include the test in the service it renders physicians. The equipment is very simple, but unfortunately involves a continuous supply of litters of the test animals (rats or mice) known with certainty to be not younger than twenty-one nor older than twenty-six days of age when the test is begun. Pending equipment of the usual laboratories for the test, as a convenience for the physicians of the state, and for a fixed charge, the anatomical laboratory of the University of California will continue to carry out the test in all cases requested. Merely 100 cubic centimeters of morning urine are required. If a postal journey of a day or longer is necessary, four drops of tricresol should be added to this quantity of urine. Otherwise any preservative is preferably omitted.

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### THE FUTURE OF MEDICAL PRACTICE— MEDICAL SERVICE ORGANIZATIONS

By C. M. COOPER, M. B.  
*San Francisco*

TODAY the individual practitioner of medicine works under many disadvantages. People are taken sick at night and suffer equally during holidays and over the week-end, as on other days. He is thus called upon to give a service which only the most enduring can satisfactorily render. When he is sick and during his vacations his expenses continue and his income ceases. Often he has little time to do the essential laboratory work and, to get the reports he requires, he has to send his patients from pillar to post. At times, much overworked and frequently poorly recompensed, he is also troubled in spirit, for he sees many patients who can ill afford to follow the advice he should give them and, however much he financially sacrifices himself, he can do little to prevent the high costs of serious sickness from crippling many of the families he attends. If successful, he, from small beginnings and after many years of practice, acquires a considerable following. If he then becomes incapacitated or dies, his office closes, no successor reaps the benefit of his labors, and those who have put their faith in him have as a body, no one to whom to turn. Physicians and patients thus jointly suffer and equally desire relief from such a situation.

To quite a number state medicine appeals as a remedy. This, if it comes, would mean that the

sick would be taken care of by the state and that physicians, surgeons, and nurses would become employees of the state.

If it were possible to evolve a plan in which politics and patronage played no part and which would continue to attract the same degree of intellectuality as the profession now attracts, there would be much that could be said in its favor. Past experience, however, with bureaucratic management of shipping, railroad, and public utilities business does not speak well for its likely success in this new field. Nevertheless there is a distinct trend toward it, and a social trend, like a secular trade trend, gains ever increasing impetus and wins ever widening support, unless the causes that lead to its inception be removed. Finally, it is apt to attain such a force that it is able to bring about a trial adoption of its tenets in spite of its disadvantages.

If the medical profession is to avoid such a contingency, it must take the lead in remedying the existing conditions. As the writer sees it a satisfactory plan must provide:

1. That all sick people can obtain competent medical and surgical service without undue delay.
2. That this must not cost more than the recipient can afford to pay.
3. That those who give the service would receive a just return for their work.
4. That the rendering of the service would not involve undue or excessive strain upon the members of the profession.
5. That it should remain possible for physicians and surgeons who achieve unusual success to earn incomes comparable with those of the leading lawyers and business executives in the same community.

With the above in mind, the writer visualizes a time:

1. When it will be the recognized duty of the state and municipality to provide such a service for all the indigent sick, and to pay those who give the service.
2. When the great mass of the people will pay a health rate just as they now pay a water or gas or electric rate, and that this rate will insure them competent ever available medical and surgical service. He hopes that private corporations, who in their standing and efficiency will compare with the great public utility companies, will arise to organize and develop and give this service. He questions whether the members of the medical profession alone are fitted by training, experience or bent to successfully develop or manage such corporations but believes that this could be successfully done if representatives of the profession associated with themselves men of the same order of training and intelligence as those who have developed the big life insurance companies. With such a system in existence, he would expect to see: (a) hospitals and service stations built on inexpensive sites; (b) corps of medical men of all types, on duty at, let us say, eight-hour intervals, giving their whole time to this work, they pre-



ferring a sure, adequate income and an old-age pension to the vicissitudes of private practice; (c) perhaps also a number who gave a certain appointed time each day to this work, they receiving in return compensation but no ultimate pension.

3. When there would still be room for men who preferred to try their fortune in private practice, and who would have the same opportunities as now exist, provided they could supply something which people believed they could not get elsewhere.

While the profession expectantly awaits such a plan, the writer believes its members could greatly improve existing conditions if they could see their way to group themselves into small unit service organizations. As he conceives them, each unit would do one line of work and would remain small enough to keep in human touch with all its patients. Thus there would be medical unit organizations and unit organizations pertaining to the specialties. Under such a system the individual members of each unit would have common offices and a common diagnostic and therapeutic armamentarium, thus considerably reducing expenses; and they would pool their service capacities, thus giving their patients an organized and ever available service. In the treatment of those needing both medical and surgical attention, corresponding units would work together and, if experience suggested that it would be of benefit to themselves and to their patients, units could, if they so desired, combine to form group service organizations.

Unit service organizations of the type outlined would probably fall into two classes:

(a) Those formed by older men who already had a considerable following. These older men would assume all the expenses and take in as their associates men who till then had not been in practice. They naturally would become the directors and develop their organizations.

(b) Those in which men of more or less equal age and experience assumed equal liabilities, shared the running expenses and pooled their service capacities. Whether the members of units of this type formed partnerships or loosely bound associations, whether they pooled and shared equally the returns or divided them according to the demonstrated earning capacity of the members, or whether a common secretary sent out separate bills for each member, would be matters of detail for a unit to decide for itself. The essential thing would be that the members combined to diminish expenses, to lessen professional strain and to give an organized service, and the unifying urge would be found in the people's demand for a type of service which the average lone practitioner is not able to give.

It is now six years since the writer decided to try to form one of these unit service organizations. At that time he had been in practice some twenty-five years, his work being of a diagnostic and advisory kind. Though the monetary returns had been amply compensatory, he had become

much dissatisfied with his system of service. Of its deficiencies he had been made very conscious by watching the working of a rather unusual type of service developed by a Japanese interpreter. This individual had been for many years bringing, and still brings, patients to the office. For them he acts as an interpreter and is paid by them for the service he renders. He is keenly interested in having his clients get well, knows what a complete clinical examination includes and means, and is anxious to have done all the laboratory work, etc., that is essential to the elucidation of the case. At specified times he brings back these patients to report. He has also on his list a number of surgeons and specialists to whom he takes his clients. These he has chosen because of their operative results, because they are habitually courteous to his people and because they are glad to accommodate their charges to the economic position of his clients. Further, he sees that a Japanese patient, taken acutely sick, gets competent service without undue delay. His people pay for the services immediately after they receive them; thus no accounts are kept and no bills are sent. This method saves bookkeeping expenses and permits a lesser charge to these patients. In other words, he has provided an economic, organized, collective and ever available service of a high type for his fellow nationals. The results obtained in the treatment of these patients—and the writer, in the course of years, has had hundreds under his care—have been extraordinarily good, this in a large measure being due to their interpreter's efficient shepherding.

The unit thus suggested has now been developed to such a point that its future seems assured and, since it has removed much of his former dissatisfaction, it occurs to the writer that it might be of value, if he said a few words concerning such a unit.

It has seemed preferable to build it gradually rather than to form it all at once, as the providing of service for which there is a demand is somewhat different from creating a demand for a surplus of service. In the former case the necessary expenditures can be freely and confidently made.

In any extensive system of unit formations, it is probable that individuals who were friends and of like professional habits would tend to group themselves together. In this unit the writer sought as associates men of whose work he knew and who were personally acceptable to him and to one another. He further considered it of advantage that they should have or acquire sufficient skill in the specialties to be able to recognize in these fields, if not the nature, at least the presence of, an abnormal condition, for such ability would enable them to save many patients unnecessary visits to the various specialists.

It is suggested that each prospective member act as an assistant for six months. During that time he can make up his mind whether or not he wishes to become a member of the unit, and the unit, in turn, can determine whether he is acceptable to them. If he leaves, it should be his privi-

lege to take with him the patients who prefer to continue under his care. It would seem a wise plan for the director and the associates to be privileged to terminate their relationship at any time, the leaving member again being permitted to take with him any and all patients who desire to follow him.

Four members seem to the writer to be necessary and adequate. The director, with his hospital and office consultation work and with his directing duties, can have little time for house visits, and so he cannot hope to substitute for an associate who may be absent. With three other members, however, two can, when circumstances demand, do the work ordinarily done by the three. Each one can thus get a satisfactory yearly holiday, and perhaps each one can have, every few years, an opportunity to visit distant clinics for special work. If four members be adequate, the addition of others would mean a desire to obtain a larger clientele, which should not be the primary aim of the organization. Moreover, with four members there should exist no difficulty in keeping in human touch with the patients and not a whit of this valued relationship should ever be organized or "department-stored" out of existence.

In considering the suitable location for a unit, it must be borne in mind that it will need plenty of working room, and that it should be situated where it is easy of access, with plenty of parking space in its vicinity. In many cities there is, on foot, a movement of the doctors away from downtown business districts where rents are prohibitive and where ever increasing congestion causes ever increasing delay. The writer believes that this is a wise plan and has followed it with satisfactory results.

If a unit of the type considered is to fulfill its purpose, its offices should be thoroughly equipped, diagnostically and therapeutically, in a modern sense. It will then be unnecessary to send ambulatory patients to hospitals for purposes of diagnosis and treatment. They will thus incur no hospital and no nursing expenses, and since in hospitals there are so many calls upon the diagnostic equipment, each call necessitating a preliminary appointment, the investigations at the office can be carried out much more expeditiously, and thus considerable time be saved to the patients. It should be the aim to extend this service so that in case of necessity bed patients can stay at home and yet have available the essential diagnostic and therapeutic facilities.

The number of nurses and technicians which a unit will need will depend upon the amount and kind of service it is called upon to give.

It would be of advantage:

1. If one of the nurses had had special training in a diet school so that she could be of help to patients, both in a dietetic and culinary sense.
2. If, when necessary, a nurse could be sent to the homes of bed patients for short periods of service, or to give instruction to the lay attendants who desire it.
3. If one of the laboratory technicians could

daily call upon the bed sick to get the required blood specimens, etc.

4. If one of the nurses and one of the technicians were on call for urgent cases over the weekend, the called individual receiving an equivalent time off during the following week.

Such a unit will need the services of a secretary and directress, who has a difficult position to fill, for she must be an economist and a conservator of the unit's supplies, an agreeable and acceptable supervisor, and a natural peacemaker, for quite an important part of her duties may be of a harmonizing nature.

These auxiliary members of the unit should receive salaries as large as those generally paid to corresponding workers in the locality of the unit. An additional yearly compensation is much more appreciated than the assurance of future benefits. The payment of such, particularly if the recipients will use it for insurance or investment purposes, is an excellent way of promoting satisfaction and of inculcating a habit of thrift and forethought for the future.

The service which a unit of this kind might consider giving can perhaps be classified into:

1. Service pertaining to the diagnosis and treatment of the ailments of private patients.
2. Service in the field of preventive medicine.
3. Near-free and free service.
4. Educational service.

#### SERVICE PERTAINING TO THE DIAGNOSIS AND TREATMENT OF AILMENTS OF PRIVATE PATIENTS

In quite a percentage of patients a complete clinical examination and the examination of the blood and excretions will be all that is necessary for the elucidation of the case. Merely inquisitive diagnostic procedures should, of course, be discountenanced. In a few persons a most intensive investigation, which will require all the modern procedures and methods, will be essential. Between these extremes there comes the large majority of patients who need investigations of varying extent.

The director will have to determine what is a fair and legitimate charge for these different kinds of investigation, and this will depend upon the economic standards in the locality of the unit and upon the extent, nature and value of the services rendered.

The charges made for taking care of grave and acute cases and for special therapeutic procedures will depend upon the nature of the work, the difficulties encountered, the time consumed and the responsibilities involved it being a good working principle never to charge more than fair-minded patients consider just and within their means to pay.

Many patients have employees or unrelated dependents whom they desire to help to get the same kind of investigation that they received. It would be in keeping with the spirit of a service



organization for it to meet such patients halfway and to itself absorb half the usual charge, it sending to the employer a bill so figured.

The writer has already referred to the service which the Japanese interpreter seeks for his fellow nationals. A unit could well render a similar service to others of like economic situation for an equivalent fee.

#### SERVICE IN THE FIELD OF PREVENTIVE MEDICINE

Preventive medicine, in its application to communities as a whole, is largely of federal, state, or municipal concern. Antityphoid inoculations, antismallpox vaccinations, antidiphtheria and anti-scarlet fever injections, which belong to this field, come, however, within the province of practicing physicians. It might well be the duty of one of the members of the unit to keep in touch with the public health situation of the locality so that the unit's patients can at once be given the benefit of any information or procedure that may have preventive value.

But there is a further development of preventive medicine which is coming more and more into use and which consists in the early recognition of incipient disease and the institution of methods to prevent or hinder its further progress. Its principle depends upon the examination of supposedly healthy people, and this at such recurrent intervals as to preclude the probability of the development in the interims of an irremediable condition. Many corporations who have a considerable number of indoor employees are coming to recognize the advantages to the employees and the economic value to themselves of such periodic examinations. Perhaps the writer may be permitted to illustrate.

For six years the unit has examined annually all the employees and applicants for positions in one of the large banks of this city.\* Most of these employees consider themselves healthy and, on inquiry, have few or no complaints. They come at prearranged hours, they are examined clinically just as thoroughly as are any other patients, and a routine examination of the urine and of the blood—which includes the serum reactions—is made. If upon any individual a further diagnostic procedure is indicated, that is also permitted by the bank. A complete record of the first examination is made and kept, and to this are added the findings of succeeding years. A short report of the findings, with comment, is sent to the bank. The bank gives a copy of his or her report to the employee. The employees are left at liberty to decide whether or not they wish to follow the advice given. No attempt is ever made to induce them to become patients of the office, but quite frequently it is suggested that they present the reports to their own physicians.

Because of the number involved, because they come at prearranged times, and because of the

large proportion who have little or no disease history, a rate can be made which will appeal to corporations as eminently fair for the kind of service that is given. For the reëxamination, a fee of one-half the amount charged for the first examination is made.

The unit has reason to believe that these examinations have been of much value to the bank and to its employees, and other business organizations have recently expressed their intention of availing themselves of a similar service.

Only a small proportion of the time of a unit, such as this aims to be, can be given to such work, but the writer believes there is likely to be a rather widespread call for such service, and that a medical unit is well adapted to render it.

Similarly, more and more individuals are requesting the same kind of service and it seems only rational to assume that in time such periodic examinations will become the rule.

#### NEAR-FREE SERVICE

The formation of unit service organizations of the kind outlined is, of course, no solution of the crying need for inexpensive yet efficient medical and surgical service for the great mass of people. For a time this organization welcomed this class during its office hours, though recognizing their inability to pay a proper return for the work done on them. A continuation of this policy would have rapidly resulted in the economic failure of the unit. Then, an attempt was made to render this service one night a week, the unit also arranging that friendly specialists and a druggist kept the same evening hours. This plan was not a success, and now each member of the unit is, like other individual physicians, trying to help those members of this class who seek his aid in the best way he can.

#### FREE SERVICE

The free service that the medical profession renders may perhaps be classified into involuntary free service and voluntary free service.

#### INVOLUNTARY FREE SERVICE

There is quite a percentage of people who do not and will not pay for the medical and surgical service they have requested and received, though they are well able to do so. They seemingly take advantage of the reluctance of doctors to make use of legal procedures, and apparently experience no shame in eluding their incurred just medical obligations. Judging from circulars lately received, a praiseworthy attempt to list these undesirables is in prospect. Such listing would lead to their gradual elimination.

#### VOLUNTARY FREE SERVICE

The rendering of free medical and surgical service to those in need has ever been, in the minds of the profession at large, a valued privilege. No unit or organization would be willing to forego

\* Instituted by Mr. J. J. Fagan of the Crocker First National Bank.

its share of this privilege. The problem is how best to do it for the benefit of the local community. In a community in which there is a scarcity of free clinics, the unit might advantageously initiate such a clinic, but in a community where an abundance of organized well-conducted free clinics already exist, it is, the writer believes, a better policy for the associate members of the unit to give their time at one of these clinics.

#### EDUCATIONAL SERVICE

It is only necessary to listen to lay people as they express their views concerning symptoms and ailments to recognize how much there is for education to do. Meanwhile cults and quacks flourish, and among their patrons and followers are lawyers, bankers and business men of high position, and apparently the more extravagant the curative claims for useless articles and products the more rapidly do they sell. Commendable books and popular lectures and magazine articles make but slow progress in modifying the wishful beliefs that the mass of the people possess. Physicians in general have been so busy in their more urgent work that perhaps they have not been able to make full teaching use of their unique relationships. If patients were shown how closely interlocked are the vertebrae of an articulated skeleton, there would be less belief in the frequency of vertebral "slips," and if they were taught a few simple anatomical and physiological facts there would be less acceptance of the healing virtues, in serious sickness, of so-called adjustments. If they were made acquainted with the simple principles of dietetics there would be fewer followers of harmful fad diets. And if they were taught a right and helpful psychology there would be fewer devotees of the various cults.

Efforts in these directions are well worthy of trial, and in a unit organization there could well be a systematic endeavor along these lines, it ever being remembered that a sympathetic tolerance, an earnest sincerity and an utter simplicity of the spoken and written word are essential to success.

There is perhaps another educational service which units could advantageously render. In the medical schools the students of today are excellently taught the science of medicine. They have less opportunity to acquire its humanizing art, and still less to become acquainted with the many problems that beset its practice. Chosen units might well serve as prepractice schools to give to near and recent graduates these opportunities.

In formulating a working plan, the director of the unit must realize that at first most of the patients who come to the organization come to consult him. They will appreciate it if he personally sees them, takes the history, clinically examines them and maps out the necessary laboratory and technical work. When all the required data are at hand, he asks an associate to see the patient with him. He rapidly summarizes the history, the

clinical, laboratory and technical findings, and the diagnostic possibilities. The associate is then asked to suggest the most advantageous line of treatment, and a definite program is outlined. The associate is then requested to initiate the program and to take charge of the patient. The patient is told that the associate is at his call day and night, and that the director, in turn, without additional charge, is at the associate's call, and that the two of them will thus attend him. The readiness with which the patient accepts this arrangement will largely depend upon the attitude of the director toward the associate. If it be an attitude of superiority, he cannot expect to instill the necessary confidence in the patient, but if it be one of medical comradeship, no difficulty occurs. Gradually the patient becomes acquainted with the other members of the unit and thus he feels he always has, in time of need, someone he knows to whom to turn. The patient, if he be later taken acutely sick, is almost sure to send for the associate, and it is the experience of this unit that he is very apt to refer his sick relatives and friends to the same associate.

It is perhaps unnecessary to say that there should be no patients whom the director is not glad to have his associates attend, however rich and influential they may be, and no patients, however lowly their circumstances, whom the director is not more than willing to see with the associates.

The director of this particular unit has found it of advantage to spend Sunday mornings making rounds and calling upon the patients who are sick with the associate who happens to be on duty, no charge being made by him for his accompanying the associate. The associate members, in their turn, will make one another acquainted with the patients whom they are attending, and will naturally assist one another in any work that requires a combination of efforts.

In considering the incomes which they should receive the director should endeavor to always make them larger than they would be apt to receive after a like number of years as lone practitioners in that locality. If they leave at any time, they, as previously mentioned, should be privileged to take with them any patients who desire to follow them, and those who have rendered efficient service will naturally take a goodly following. Such an arrangement is perhaps to the disadvantage of the director, since the associate could leave and take with him not only the patients who have come to him personally, but also many who have been directly and indirectly placed under his care by the director. However, an understanding of this sort protects the associate and is evidence that the director is seeking him in good faith as a permanent associate and successor. To enable both parties to make other connections, a three months' notice of an intended severance should be given. As an incentive to keep intact a satisfactory functioning unit, an arrangement, to take effect upon the death or retirement of the director, which should be defi-



nately favorable to the associates, might well be provided. If, however, after the organization has been completely built and is working smoothly, the associates should prefer to become junior partners, it should be the aim of the director to evolve a plan which would fully satisfy their aspirations. This has been done in this particular unit, and it is arranged that the successive directors automatically retire on reaching the age of sixty-five, though, if the retiring director should still desire to work, it would seem practical for a successful unit to continue to use him for some years in a consultant capacity.

As the unit develops the question will probably arise, should it endeavor to attach to itself a surgeon and other specialists, thus entering the field of group medicine? The director of this unit is afraid that by doing so it would lessen its capacity to render the kind of service for which it was formed. Much rather would he prefer to work with a similarly constructed surgical unit with which he had no economic connection. At the present time, being located in a large city, the unit is able to choose from a large field of competent surgeons and specialists those with whom it can work to the best advantage of its patients, and this privilege its members would be unwilling to forego.

Units, to continue to exist, must be financially successful. To insure this it is necessary that they be conducted with the same regard for economy as are the higher types of business organizations. A capable directress can aid much in this direction, and the patients themselves can cooperate by meeting their accounts with the same promptness that they attend to their other financial obligations.

The organizing capacity of an individual is evidenced by his ability to create an organization which can dispense at any time with the services of any member without losing any of its efficiency. A director of a unit service organization can feel he is really successful in his efforts when he has brought it about that he himself is no longer essential to its efficient carrying on. When that occurs the unit will approximate type "b."

In conclusion, the writer would like to say to older physicians that the formation of a unit of the kind considered is well worthy of their consideration, for—

To the director it brings the consciousness of a larger usefulness and, through daily association with younger men, tends to keep his mind plastic and youthful.

To the associates it gives the opportunity to practice their profession under ideal conditions, it brings them in daily contact with one from whom they can learn something at least of the "art of medicine," and, to those who perform their duties efficiently, it assures a bright future.

And to the patients it brings a service organized, relatively economic, collective and ever available.

2000 Van Ness Avenue.

## ECZEMA—SOME RECENT CONTRIBUTIONS TO ITS STUDY\*

By SAMUEL AYRES, JR., M. D.  
Los Angeles

DISCUSSION by Irving R. Bancroft, M. D., Los Angeles; C. Ray Lounsberry, M. D., San Diego; Hiram E. Miller, M. D., San Francisco; Stanley O. Chambers, M. D., Los Angeles.

A REVIEW of the literature during the past five years reveals the fact that an astounding wealth of new ideas has greatly broadened our conception of the clinical entity known as eczema. In using the term "clinical entity," I wish to emphasize a fact which has been pointed out many times but which is frequently ignored, that eczema is not a disease entity in the sense that diphtheria, smallpox, or tuberculosis are disease entities, but rather is a clinical symptom with multiple etiology in much the same category as a headache.

Much unnecessary debate has been waged over the relative value of the terms "eczema" and "dermatitis." Either diagnosis would be inadequate without a parenthetical notation of the etiology, if known, or a definite statement of "cause undetermined" in cases of obscure etiology. Since the word "dermatitis" means literally inflammation of the derma, a definition which is broad enough to include erysipelas, carbuncles, and many other non-eczematous inflammations, it would seem that eczema or eczematoid dermatitis might convey more specific information.

When one considers the varied stages through which a typical case of eczema may pass—pruritus, erythema, edema, vesiculation, exudation, crusting, subsidence, desquamation, with the occasional development of papules, pustules, or lichenified thickening, and the necessity of varied treatment according to the stage presented by the individual patient, it is small wonder that eczema constitutes one of the major problems not only for the dermatologist but for the general practitioner as well.

### BASIC PRINCIPLES IN DIAGNOSIS

Let it be repeated that no case of eczema may be regarded as properly treated unless the diagnosis includes a definite statement of etiology either known or undetermined; which implies that a careful search has been or will be made in order to determine the cause, which may be either an external irritant such as some chemical or physical agent, bacterial or fungus infection, or some constitutional disorder of a functional or organic nature. Aside from mere curiosity, the rather obvious reasons for determining the etiology of the eruption are that the attack for which the patient comes for treatment may be more rapidly cleared up, that recurrences may be prevented, and that possible underlying constitutional disorders of which the cutaneous manifestation may be a signal may be discovered and remedied.

The first problem, then, which confronts the physician who is dealing with a patient with

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eczema is to know when to be an internist and when not to be. If one were to apply every known diagnostic test to every patient presenting an eczematous eruption, very few patients would have the money or the perseverance to go through with the examination. A careful history and cutaneous inspection will often, but by no means always, indicate the appropriate line of investigation.

Eczemas which have sharply defined borders and which give a history of having begun with one or two small lesions which have gradually enlarged and multiplied suggest an external infection, due either to bacteria, yeasts, or ringworm fungi. The picture known as epidermophytosis, characterized by scaly or vesicular eruptions of the hands, feet, or genitocrural region, can be confirmed by finding the ringworm fungus in direct microscopic examination of scales or excised vesicles. Failure to find the organism should serve as a warning against too vigorous treatment, since, as Mitchell<sup>1</sup> points out, many of these cases may be due to bacteria or to toxic causes. The eczematoid condition known as dysidrosis or pompholyx may closely simulate epidermophytosis. Recently C. J. White<sup>2</sup> and Cleveland White<sup>3</sup> have pointed out that many of the cases hitherto regarded as toxic eczemas were in reality due to a very small yeast-like organism, the *Cryptococcus*, and that treatment instituted along the lines indicated, as the result of microscopic examination, has converted many hitherto obstinate cases into conditions that have promptly cleared up. This work is so new that it has had very little confirmation, but the character of the men who brought out these pictures justifies the belief that a major contribution has been made to dermatology. Many of the dry, scaly types of eczema, especially flexural eczemas, apparently belong in this group.

#### SOME LOCALIZED ECZEMAS

*Hand Eczemas.*—Eczemas which are confined to the hands are often caused by local chemical irritants; a complete list is almost unattainable since almost any substance may constitute an external irritant in a susceptible individual. Every day, however, new items are being added to the list of local irritants. Some of the irritants most often met with include paints, dyes, polishes, oil products, lacquer, novocain, formaldehyd, primrose, various vegetables and plant leaves and fruit juices, and ink. Very recently E. A. Oliver<sup>4</sup> reported a series of fifteen cases of an eczematous eruption of the face and hands due to rotogravure ink in the pictorial supplement of the Sunday paper. Cole<sup>5</sup> has compiled a list of cosmetics which may produce eczematous eruptions about the face, head, and neck. Many hair dyes and tonics contain such irritants as lead acetate, mercury, wood alcohol, paraphenylendiamin, resorcin, phenol, salicylic acid, silver compounds, and pyrogallie acid. Skin bleaches may contain high concentrations of mercury; face enamels often contain lead and bismuth, but even such ordinarily harmless substances as orris root or rice powder

may provoke an eczema in an individual hypersensitive to these proteins. Depilatories usually contain calcium or barium, and eyelash mascara may contain paraphenylendiamin. Face or lip rouge is sometimes colored with an anilin dye.

*Neck Eczemas.*—Eruptions about the neck may be due to a fur which has been dyed black with paraphenylendiamin, or brown with quinone, or may be due to the roughness of a wool scarf. Some eczemas of the face and exposed parts of the neck and arms are caused, in part at least, by hypersensitiveness to the ultra-violet rays of the sun. This suggests the caution that must be exercised in treating eczema with quartz light.

The predilection of an eczema for the face or hands does not necessarily prove that the cause is external, but should at least serve as a stimulus to rule out such a cause. Such eczemas may be seen in individuals who possess delicate skins and are addicted to daily hot soap and water baths, especially if they have passed middle life and the season happens to be winter. The cases that began as scabies, or fungus infections that have become converted into eczema as the result of too strenuous treatment, must also be remembered.

*Eczemas from Constitutional Causes.*—The history may at times serve as a valuable clue to the eczemas of constitutional origin; but is often of no help. Beinhauer,<sup>6</sup> in a series of one hundred and fourteen private cases of eczemas in which series he excluded infantile eczema and any case in which an external causative factor was known, found that every patient revealed some definite constitutional disorder of which impaired function of the excretory or metabolic systems were the commonest; whereas 23.6 per cent of a series of one hundred and fourteen cases of non-eczematous dermatoses revealed constitutional disorders.

#### PROTEIN HYPERSENSITIVENESS

A history of repeated attacks of eczema since infancy, especially if accompanied by allergic manifestations in the patient or the family, such as eczema, urticaria, hay fever, or asthma, should immediately suggest the possibility of protein hypersensitiveness and should call for a complete testing of the food proteins. Occasionally brilliant results will be achieved by isolating one or more offending proteins and excluding them from the diet. On the other hand, disappointment may be the only result of such an investigation.

A careful checking over of the entire gastrointestinal tract may reveal the hidden pathology. Alden<sup>7</sup> has recently reported two cases of generalized eczema of several years duration in whom marked improvement followed the removal of pathologic gall bladders. The gall-bladder dye test revealed the abnormality in both instances. Highman<sup>8</sup> has recently reported a case of universal eczema of fourteen months duration which cleared completely within a few weeks following the removal of an infected kidney. Other foci of infection, such as teeth, tonsils, sinuses, prostate, appendix, large bowel, may also be possible sources of certain cases of eczema.

Gundrum<sup>9</sup> has reported an interesting example of a case of eczema apparently due to what might



be termed a focus of irritation. The patient had suffered from a universal eczema as well as severe asthma for about ten years. Although no obvious infection was discovered in the sinuses, cocaine-ization of the sphenopalatine ganglion temporarily stopped both the asthma and the eczema on five separate occasions. Permanent cessation of both conditions followed alcohol injections of the ganglion.

Both Urbach<sup>10</sup> and Ehrman<sup>11</sup> have found a low gastric acidity, in some cases amounting to an almost complete achylia, in more than half of a fairly large series of cases of eczema studied. The fractional method of gastric analysis was used. Waller,<sup>12</sup> however, in a much smaller series of cases found a predominance of hyperchlorhydria. It is easy to see how the failure of adequate gastric digestion might lead to the formation of abnormal or toxic metabolic products in the lower bowel. Failure of pancreatic digestion could do the same thing. Rueda<sup>13</sup> reports a series of seventy-five cases of infantile eczema and seborrheic eczema which were cured in a striking manner within one to four weeks by the feeding of pancreas in tablet or pulverized form. The author has recently seen a striking example of such a result in a six-year-old boy who had suffered from severe and generalized eczema almost from birth, in whom many food proteins gave strongly positive reactions. Yet within less than two months after treatment began, the eruption disappeared completely on pancreatic substance, even though the diet indicated by food sensitization was not strictly adhered to.

Burgess<sup>14</sup> feels that endogenous irritants, especially from the gastro-intestinal tract, in the form of amino-acids and other protein decomposition products, may produce eczema. Excluding histamin, which gives positive cutaneous reactions in almost everyone, he obtained positive reactions in 16.6 per cent of a series of one hundred and nine consecutive cases of eczema, against 2 per cent of a control series of one hundred and two non-eczema cases. Therapeutically such cases responded fairly well to *Bacillus acidophilus* cultures and small doses of salines, even in the absence of constipation.

A number of investigators<sup>15 16</sup> have established the fact that disturbances in the carbohydrate metabolism, as revealed by the glucose tolerance test, constitutes another important cause of eczema. In patients of this group the history is often valueless; a routine urine test is frequently negative for sugar, and a single fasting blood sugar determination may be well within normal limits. The author has seen several instances in which the fasting sugar was under 110 milligrams per 100 cubic centimeters, but in which values as high as 250 to 300 milligrams per 100 cubic centimeters were recorded in one-half to one hour after the oral administration of glucose. Usher and Rabenowitch<sup>17</sup> have found glucose to be a normal constituent of sweat. The rate of excretion and the amount excreted were increased in cases showing a low glucose tolerance.

Schamberg and Brown<sup>18</sup> found a high blood uric acid in 44 per cent of two hundred and eighty

eczema patients, and Michael<sup>19</sup> in 40 per cent of seventy-five patients. In both series of cases improvement followed a low purin diet, although Michael does not feel that uric acid *per se* is a dermal irritant.

#### CALCIUM-POTASSIUM RATIO

Klauder and Brown,<sup>20</sup> in a series of studies extending over a period of four or five years, have contributed some very interesting data bearing on the calcium-potassium ratio in relation to cutaneous irritability. They regard eczema as "a pathologic process in which the cutaneous neuro-cellular mechanism is out of balance. The cutaneous sensibility in rabbits and cats was tested by applications of croton oil. The calcium and potassium content of the entire skin of the animal was determined, not merely the blood calcium.

Some of their more important findings were as follows:

1. Rabbits varied considerably in individual cutaneous irritability, but the degree of irritability varied inversely with the calcium content of the skin and directly with the potassium content in the majority of cases. Eighteen rabbits were used.

2. Blood chemistry. The cutaneous sensibility could not be correlated with the blood chemistry studies, especially calcium, but could be correlated with the skin calcium.

3. Diets. The cutaneous sensibility decreased after an all-green diet for ten days, increased after an oat and hominy diet; remained unchanged after one week of starvation. The cutaneous sensibility was correlated with the calcium and potassium content of the skin in the majority of cases.

4. Injection of calcium chlorid produced a striking decrease of cutaneous sensibility.

5. Injection of acids. The daily injection of N<sub>10</sub> HCl and of 3 per cent solution of oxalic acid, which killed the animal, did not alter the cutaneous sensibility.

6. Nephritis and hepatitis. Experimentally produced nephritis and hepatitis resulted in a marked increase in cutaneous sensibility even before changes appeared in the blood chemistry.

7. Splenectomy, etc. Removal of the spleen, pancreas (one-half to three-fourths) and suprarenals caused no change in cutaneous sensibility even when death ensued from removal of both suprarenals.

8. Narcosis. Administration of chloral hydrate by rectum resulted in a striking decrease of cutaneous sensibility.

9. Injections of serum of eczema patients and normal individuals produced a definite decrease of cutaneous sensibility.

10. Injections of milk and sterile water gave conflicting results.

11. Injections of starch and sodium sulphate produced no change, but the injection of gelatin decreased the cutaneous sensibility.

12. Arsenic (neoarsphenamin) when injected in a sublethal dose caused a definite although not striking increase in cutaneous sensibility.

13. Injection of pilocarpin (stimulation of the parasympathetic or vagus system) led to an in-

crease in cutaneous sensibility. Autopsy after a series of such injections revealed a low skin calcium and a high skin potassium.

14. Injection of ephedrin (stimulation of the sympathetic) and atropin (paralysis of the parasympathetic) produced a decrease in cutaneous sensibility with autopsy showing a high skin calcium and a low skin potassium.

These experiments are to be regarded as introductory rather than final, and they open a new chapter in the study of cutaneous pathology. As far as they go, there seems to be some justification for the time-honored custom of administering calcium in certain cutaneous disorders such as eczema and urticaria. However, it has recently been shown that in order to secure a maximum absorption, calcium should be administered in rather large amounts (four or five grams) as a powder dissolved in water and given on an empty stomach, rather than as five-grain tablets after meals, as is frequently done.

#### OTHER STUDIES

Before concluding this review, mention must be made of the work of Throne, Van Dyck, Marples, and Myers,<sup>21</sup> who have found arsenic in pathologic amounts in a large number of their patients with eczema. The arsenic can be acquired through medication, occupational contact, food contamination, and in unknown ways. In these cases of arsenical eczema, brilliant results usually follow the administration of sodium thiosulphate intravenously.

It is realized that the above remarks do not include all of the contributions to the study of eczema which have appeared during the past five years. Attention should be called to the work of Burnett,<sup>22</sup> whose studies on the intestinal rate lead him to believe that some cases of eczema are due to faulty absorption of essential food elements due to a too rapid peristaltic rate; also to the observations of Klauder<sup>23</sup> on improvement in generalized eczema following therapeutically induced sleep; and the similar work of Lebedjew,<sup>24</sup> who produced marked benefit through intravenous bromid treatment. Much has been accomplished with nonspecific protein therapy by the injection of whole blood or other colloidal substances. Correction of glandular deficiencies, thyroid, ovarian<sup>25</sup> and testicular, have given satisfactory results in a few carefully selected cases. Pruritus and eczema ani have been reported as being caused in some instances by an idiosyncrasy to mineral oil<sup>26</sup> used in treating chronic constipation.

#### SUMMARY

A review of the literature dealing with eczema during the past five years emphatically reinforces the idea that eczema is a symptom complex having many possible causes both external and internal, and that treatment in order to be successful must be directed along etiologic lines. Notable contributions to our understanding of eczema include: experimental studies of calcium-potassium ratio with reference to the sympathetic-parasympathetic nervous system; observations on the carbohydrate and protein metabolism; on foci of

infection and foci of irritation; on the gastric secretion, pancreatic and other glandular deficiencies; sedative measures; local chemical irritants; and bacterial and fungus infections.

Enough has been said to indicate the need for highly specialized dermatologic knowledge on the one hand, and close coöperation with the practitioner of internal medicine on the other; with the constant assistance of the laboratory worker and experimental investigator, if the eczema sufferer is to find the relief which he seeks.

315 Westlake Professional Building.

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#### DISCUSSION

IRVING R. BANCROFT, M. D. (812 Detwiler Building, Los Angeles).—Doctor Ayres' review of recent literature on eczema should remind us that there is a definite eczema threshold and that this threshold varies in different individuals and also, in the same individual, under different conditions.

As the author states, the different conditions which modify this threshold or this eczema susceptibility are



chiefly internal. Any glandular, excretory, digestive, or nervous dysfunction is liable to have the power of modifying the susceptibility to eczema. To ferret out the definite basic cause requires a profound knowledge of internal medicine, fortified by a knowledge of physiologic chemistry. The immediate cause of the eczema eruption is often very evident, but to find the cause of the lowered threshold is another and more difficult matter, and without a knowledge of the basic cause no permanent cure can be made. The mere prescription of an ointment is like stopping up the rat hole without trying to kill the rat.

It would be interesting to see whether, in the light of modern investigation, the theory originally promulgated by Brock that certain objective forms of eczema arise from certain definite etiologic causes will be proved. Can it be definitely stated that eczema which is characterized by a papulovesicular eruption comes from gastro-intestinal fermentation, that eczema characterized by excessive itching and lichenification comes from external irritants, or that the erythematous, scaly form comes from nutritional disturbances and an excess of alimentary nitrogenous products?

The very interesting animal experiments of Klauder and Brown would seem to indicate that starvation does not modify the cutaneous susceptibility to eczema, but we all know that the eczematous baby is a fat baby, and it is authoritatively stated that during the late war, in starving Germany and Russia, that eczematous eruptions were very rare.

Eczema, according to all these recent investigations, is merely a weathervane which should serve to point the way to further investigations so that the underlying causes may be found and remedied; and if possible, that further exposure to the immediate cause will not be followed by any troublesome eruptions of eczematous dermatitis.

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C. RAY LOUNSBERRY, M. D. (Medico-Dental Building, San Diego).—The author has presented my conception of the misnomer, "eczema." I have felt for years that this term was used to mask our ignorance in diagnosing certain skin lesions. Just as jaundice many times is a symptom of a deeper seated process within the abdomen, so eczema is a symptom complex of some underlying condition which manifests itself by oozing, inflammation, vesiculation, and pustulation, combined with itching. It is not a disease.

I especially appreciate the effort that Doctor Ayres has made in giving us the review of the literature on eczema, as it is presented today. These reviews show definitely the trend of the times in modern dermatologic thinking. Causation seems to be the keynote which is presented by most of the writers on this subject. For by going carefully into the etiology of all difficult cases, by using every known laboratory test, by giving the patient a good physical examination, then in diagnosing a given state, we can ultimately arrive at a conclusion as to definite treatment.

To illustrate this point: A patient came into my office complaining of all of the symptoms of a classical eczema. After a complete survey of her case from every angle by myself and my colleagues, her only positive finding was a bad pair of tonsils. She cleared up immediately after a tonsillectomy had been performed. Another case with the same classical symptoms cleared up after an old chronic appendix was removed. So it behooves us to go carefully into all of these cases, and by finding the causal foci of the trouble many times the symptoms of the disease can be relieved.

Working on such a theory, in those allergic cases which had associated with their eczema-like symptoms, hay fever and asthma complications, a blood calcium estimation was made. In a series of ten cases the blood calcium was below normal. These cases were treated with 10 cubic centimeters of sterile 10 per cent calcium gluconate solution (Sandoz) intravenously, until seven ampoules were given, after

which a blood calcium reading was made. The record proved that six of these ten cases responded to logical supplementary treatment in proportion to the rise in the blood calcium. The other four cases in the series were not helped by calcium therapy. I have observed very little benefit from calcium therapy when given by mouth.

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HIRAM E. MILLER, M. D. (384 Post Street, San Francisco).—Doctor Ayres has given us a good résumé of the recent studies on the etiology of eczema. In his preliminary discussion he includes under the heading of eczema, eruptions due to external irritants, due to fungi, yeasts, etc. From a didactic standpoint most authors prefer to classify these as dermatitis venenata, dermatophytosis, etc., and reserve the term "eczema" for an eruption of which the cause is generally not known, but is assumed to be an internal, constitutional one.

I am extremely interested in this type of investigative work, but have not found the practical application of it to be particularly helpful. One investigator will take one hundred cases of so-called eczema and find a low gastric acidity in one-half of them; another will find a preponderance of hyperchlorhydria in a similar number of patients, a dysfunction of the pancreas, a disturbed carbohydrate metabolism, a high blood uric acid, etc., etc. This reveals the various metabolic changes associated with "eczema" and perhaps the effect of the personal equation or the individual interests of the man doing this type of investigative work.

The number of eruptions classified as eczema have been greatly reduced in number in the past ten or fifteen years. This has been accomplished mainly by bacteriologic and allergic studies and not through biochemical investigations. However, I feel certain that this type of experimental work will ultimately solve some of the remaining etiologic problems of eczema, as the men that are most interested are well trained in biochemical and dermatologic investigation.

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STANLEY O. CHAMBERS, M. D. (1260 Roosevelt Building, Los Angeles).—Eczema still remains the dermatologic Waterloo for both the student and the practitioner of medicine. The bulging literature crammed with ideas, methods, drugs, and etiologic bogies is only too well known by those who constantly search for the light.

Most assuredly the presentation of Doctor Ayres gives the listener an appreciation that a certain relationship of metabolic processes to dermatologic consequences acutely exists. Yet a degree of uncertainty cannot fail to creep in where results are so inconsistent. The keynote would seem to be the absence of a single cause in the explanation for a disease which apparently is an entity in its clinical sense. Such a view has been held by certain of those engaged in the study of eczema and the allergic phenomena, and so far their work evidences a progression toward this very point.

I myself believe that the products of metabolism, normal or abnormal, are not the causes of eczema *per se*, but that such products disturb the balance of a more basic causative mechanism, which results in the cutaneous manifestations which we term "eczema."

If this be true the dermatologist will be no less an internist than he is now.

That knowledge which we now have at our command, knowledge given to us by investigators whose reports Doctor Ayres has so thoroughly reviewed, should be utilized.

✽

DOCTOR AYRES (Closing).—I appreciate the discussion which this review has stimulated. Another new contribution which was not mentioned in the paper or by the discussers is the fact that a fungus infection of the feet may produce a toxic vesicular or scaly eruption of the hands strongly resembling the original condition of the feet, but free of parasites.



## CAPSULOTOMY METHOD OF LENS EXPRESSION\*

By DELAMERE F. HARBRIDGE, M. D.  
*Phoenix, Arizona*

DISCUSSION by Lloyd Mills, M. D., Los Angeles; Dohrmann K. Pischel, M. D., San Francisco.

OPHTHALMOLOGIC literature discusses from every conceivable angle the cataract problem. What the essayist writes may to some seem academic, or the repetition of mere platitudes. The very fact that so much has been written and that such a variety of measures have been proposed in the treatment of cataracts is inferential evidence that the ideal procedure has not yet been attained.

Of a conservative temperament and having developed in conservative medical surroundings and with the ever present thought that a patient's eyesight is the goal, the writer, perforce has elected the capsulotomy method, with a preliminary iridectomy, as the preferable method in dealing with the removal of a senile cataract. The manner of doing this operation in many details is individual in style.

Relevant to this matter, the author quotes the pertinent statement made by Doctor Zentmayer, his teacher and ophthalmic guide. Doctor Zentmayer states that "the utility of an operative procedure must be estimated, not by the technique and results of its most skillful interpreter, but by those likely to be attained by a surgeon of average ability." Wilder observes that the value of any cataract procedure is not proved by the visual acuity obtained, statistically recorded, but rather by how little reaction to the trauma results.

Having fixed upon the capsulotomy operation, and judging by his personal experience, the writer has no reason to delve into the mysteries of other methods, but is quite content to await a better procedure which will come as the numerous heterodox methods crystallize into an orthodox procedure.

### PREPARATION OF PATIENT

This embraces a proper preparation of the field of operation: a well-chosen assistant, fully competent to control the lids; the needed assortment of instruments; and a coöperative mental attitude of the patient. The field is prepared in the usual manner, with the possible difference that the ciliary borders of the lids are not scrubbed, simply gently wiped. Wilder's suggestion is valuable. Remove the cilia with scissors, leaving the central ones to be used as a handle, for, as he points out, the operator's attention should be centered precisely upon the corneal section, and in doing so it is quite possible that the point of the knife, unobserved, is likely to come in contact with a few stray cilia at the extremities of the lids. The

possible infection from the lid borders, or the danger of interference by the cilia, the writer largely guards against by the use of solid and rather broad lid retractors, they being retained in position by a competent assistant until completion of the entire operation, thus avoiding all unnecessary manipulation of the lids. Particular attention should be directed to the lacrimal sac. Culture and examine the conjunctival secretions, and when indications seem to warrant it examine the conjunctival scrapings. Examination of the comparative ratio between the systolic and diastolic blood pressure, with especial attention to the latter, is of vital importance. As a preliminary step, but of no less importance, is the cultivation in the patient of a proper mental attitude, so necessary for complete coöperation. This is encouraged by a full confidence between surgeon and patient. Do not request too much of the patient, but rather encourage him to assume a passive frame of mind. One under the stress of a cataract operation should not be burdened with too many admonitions, or his equilibrium is liable to be so disturbed that he will be unable to properly coördinate. During the operation there should be absolute silence. Not only is it unbecoming for the surgeon to assume a bombastic, domineering demeanor, but it is fatal to the best interests of his patient. How purposeful are the words of Ammar of Mosul, that Egyptian eye surgeon who originated suction in soft cataract, now known as Daviel's extraction. He was very solicitous for the welfare of his patient, shuddered with desperation if the operation did not progress favorably. He recommends "to proceed with caution and circumspection, addressing kind words to his patient when the cataract needle enters the eye." He makes great demands upon the eye surgeon—that he should be provided with sharp senses, a sure hand, and greatest experience.

### ANESTHESIA

Too much emphasis cannot be placed on the matter of thorough anesthesia. Not only surface anesthesia, but complete lid anesthesia is essential. Van Lint's method of injecting a 2 per cent novocain solution along the lower orbital rim, in the neighborhood of the external canthus and over the site of the lacrimal sac, is ideal. The greatest single advance in cataract surgery is undoubtedly due to proper lid control. Satisfactory lid anesthesia, together with full confidence between patient and surgeon, represents 90 per cent of success.

### OPERATIVE PROCEDURES

It is the writer's practice to do a preliminary iridectomy. It guards against the iris falling in front of the knife when later making the corneal section. It facilitates the capsulotomy. It overcomes the need for the patient to look downward at the time of lens expression. It is a possible aid in maturing not fully ripe lenses. In some it may temporarily improve vision. It is a safe-

\* Read before the Eye, Ear, Nose, and Throat Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



guard against glaucoma. It avoids extra trauma at the time of lens expression, thus obviating a disturbing bleeding which would seriously inconvenience further manipulations. The most important feature, however, is the fact that the patient receives an education as to the required conduct necessary for successful coöperation. In turn the surgeon learns the temperamental peculiarities of his patient, and how his tissues react to the insult inflicted. In a discussion with one of our country's most distinguished eye surgeons on this matter of preliminary iridectomy that surgeon stated that while he used, upon occasions, some of the newer methods, yet if his eye was to be operated upon for cataract, he certainly would desire a preliminary iridectomy, followed later by capsulotomy and expression.

An interval of three or four weeks is allowed to elapse before making the corneal section. A well-made, clean incision, properly placed, lends much to success. Unmindfulness of this feature may precipitate serious consequences. The incision must be of such length as to permit the lens to escape readily, without stripping the cortical material from the nucleus or breaking of the lens. Leaving an undue amount of cortical substance within the eye has a distinct disadvantage, subjecting the eye later to possible serious positive lens reaction.

The incision must be so placed as to give the required length without invading important uveal structures, and also avoid the possibility of later gaping of the wound. While the use of sutures is advocated by some, it has many inconvenient features. The placing of the incision in that portion of the cornea which is best nourished aids much in the future healing process. Primary healing of the wound is essential. An incision placed entirely in the sclerocorneal limbus, occupying about two-fifths of the circumference of the cornea, will meet more nearly the needs; if placed wholly in the cornea, a much larger incision will be necessary, thus courting the dangers from a gaping wound. A small conjunctival flap is desirable in that it heals more promptly and thus seals the wound. If a small hemorrhage is encountered, it can be controlled by the use of epinephrin.

After the corneal puncture is made, the blade of the knife is pressed forward, making the counter puncture and without hesitation cutting up in the line of the limbus deftly and promptly. Immediately before completing the section, less aggressive action is essential. The entire procedure requires the nerve of a lion and the tactile delicacy of a lady's hand. The writer is accustomed to use a knife, the belly of which is two and one-half millimeters in width, and straight up, to within four millimeters of the point. Daviel, who in 1753 really was the inventor of the intracapsular method, devised this semicircular incision. Since that time it has undergone many modifications, only to return to its original form.

Couching, which showed a 40 per cent loss of eyes, was thus reduced to 10 per cent, and later Albrecht von Graefe's introduction of the capsulotomy method further reduced the loss to between 2 and 4 per cent.

In performing the capsulotomy, the method of incision is quite individual to the operator. Knapp suggests an incision paralleling the corneal section. Crucial incisions of A and V type are recommended. The writer's practice is an attempt to join two semicircular incisions. In recent years forceps have come into greater use than formerly in the removal of the central portion of the capsule. Certain distinct advantages are gained with this method in preventing the wound closing, and thus retaining some of the lens material. The disadvantage of the retention of an undue amount of lens material is obvious. In the use of forceps the danger of a sudden upward movement of the eye is to be guarded against. Fischer has devised a special forceps for this purpose.

In the removal of the lens, three anatomical features are presented: the capsule, the cortex, and the nucleus. Immediately we are confronted by one of two procedures, whether delivery of the entire lens in its capsule, "the intracapsular method," or the delivery of the lens, cortex and nucleus, leaving much of the capsular membrane, "the capsulotomy method." The writer elects the latter. For the purpose of lens expression, two spatulae of two millimeters in width are used, one curved on the flat at the outer half at about forty-five degrees. One guards the wound; and with the convex surface of the curved spatula, pressure toward the interior of the eye is applied, just inside the lower limbus, opposite the lower lens border. The pressure should be firm, steady and definite at first, cautiously and gradually increasing in force. This causes the wound to gape and the lens to start. Such directed and controlled pressure is continued until just before the greatest thickness of the lens is about to be engaged in the wound. At this time it is well to pause a moment to allow the tissues to accommodate themselves to the decreasing tension. The succeeding pressure is to be directed upward toward the wound, bringing along with the spatula the nucleus and as much of the soft cortex as possible. The first pressure tilts and displaces the lens, causing the edge to present. The second pressure forces the lens out of the eyeball. To accomplish this phase of a cataract operation requires a trained eye and a hand capable of exerting with delicate precision just the right pressure to achieve the desired results. As the lens is delivering, the pressure is lessened, but the same level is maintained and the spatula turned slightly, so that the convexity will receive the lens nucleus and as much of the cortex as may come away. Remaining soft cortex or lens débris may be removed by repeating the corneal pressure two or three times. Many operators accomplish this by irrigating the anterior chamber. It is the writer's habit to "get in and get out" with the least amount



of manipulation. At no time is the patient commanded or unduly urged to change the position of his eye from the primary position. This more or less passive position is much in accord with the passive attitude of the patient. Should there be, after delivery of the lens, undue gaping of the wound, or the presentation of uveal tissue, or perchance vitreous, further manipulation is immediately stopped and the lids allowed to gently close. After a rest of several minutes the field of operation is again exposed and the toilet of the eye completed.

Prompt and uncomplicated recovery is greatly facilitated by a well-conducted toilet. The completeness with which these measures may be carried out depends greatly upon the conduct of the patient. In the tractable, this program can be conducted successfully, but in the utterly intractable patient it is far safer to attempt only the most imperative measures. Removal of any remaining cortical material, if not successfully accomplished by stroking the cornea, may be attempted by irrigation. Probably the safest apparatus is an all-glass syringe with a small metal pipe such as a dentist uses in irrigating a dental canal. The tip should be placed at the lips of the wound, certainly not beyond the inner edge. Occasionally a spatula or a Daviel spoon is of service. Reposition of the iris, freeing the angles and smoothing out the pillars of the coloboma are best done by the spatula. The incision is to be cleansed, freeing it from all debris, and with forceps gently removing any shreds of clotted blood. Careful coaptation of the lips of the incision and placing in position the narrow conjunctival flap completes the procedure.

Both eyes are covered with a light dressing and a pad of four or five thicknesses of gauze, with four tapes, two longer so that they may be tied in the neighborhood of the ear, the whole being held in position by two strips of adhesive. No heavy or cumbersome masks or dressings are used. In perfectly smooth cases the eye is not inspected or the dressing changed for four days.

#### RESULTS

In selected cases of cataract 85 to 90 per cent of the operations will yield first-class results. In unselected cases, probably 15 to 20 per cent will show indifferent results or loss; about 5 per cent are failures. Many of the difficulties are due to intractable patients, diseased conditions, inadequate lid control, poor instrumentation, particularly improper knives, and lenses with large nuclei and small sections.

After-cataract is a complication present in probably 75 per cent of cases. Knapp, together with others, advocates early discission. The writer feels more confident to wait six weeks to two months. By either the Knapp or Ziegler method, or the small de Wecker scissors, he has always found it a difficult procedure to produce a good opening in the capsule. However, since Wheeler has given us his method of dealing with

after-cataract, the question has been simplified to almost 100 per cent ideal.

#### OPERATIVE PROCEDURES COMPARED

In 1911 the Chicago Ophthalmic Society presented a very exhaustive symposium on the expression of senile cataract. This symposium was taken part in by nineteen distinguished ophthalmic surgeons. All phases of the subject were discussed, based on the best information obtainable up to that time. It was a time, many will remember, when intracapsular methods were being actively discussed. One hundred and sixty replies to a questionnaire received from ophthalmic surgeons throughout this country relative to the comparative merits of the capsulotomy and intracapsular methods were analyzed. It is somewhat interesting to observe that (knowing the personnel, to a large extent, of the list that replied to the questionnaire) one can associate the intracapsular operation with those of a more venturesome turn of mind. Of the one hundred and sixty replies, only 30.6 per cent had performed the intracapsular operation, 34.6 per cent of this number considered the intracapsular method inferior. Some of the objections offered were: greater difficulty in performing the operation, loss of vitreous, lack of safety for the operator of average ability, and a greater percentage of poor cosmetic results. Of the percentage that had performed the operation, 22.4 per cent reported poorer vision. Those doing the capsulotomy method reported from 40 to 80 per cent of their cases required a discission. Eight noted iritis, one glaucoma, and four reported infection. Since that time much experience has been accumulated. The writer selected eight of the outstanding surgeons who answered the questionnaire and to these he addressed communications calling attention to their answers in 1911, and requested their further opinion based upon subsequent developments. Their replies were as follows:

*Jackson, Edward.*—His opinion has not changed. The intracapsular methods have failed to do what was hoped from them. For his own eyes he would not submit to the intracapsular method.

*Zentmayer, William.*—Capsulotomy method safer. Looks with favor on the Knapp's intracapsular method, but does not do any of the intracapsular operations.

*Würdemann, Henry.*—Does about 60 per cent of his cases by the intracapsular method. About five hundred cases since 1908.

*Fisher, William.*—Has changed his intracapsular methods of operation. Does not do the Smith operation any more. Does a modified Barraquer method. States if surgeons would be fair and noted amount of postoperative inflammation and poor vision due to retained capsule, they would not stress the complications which sometimes follow the intracapsular methods.

*Wilder, William.*—Does an intracapsular operation similar to the Knapp method. If it were his



own eyes he would prefer a preliminary iridectomy, followed by a capsulotomy and expression.

*Green, John.*—Believes the capsulotomy method a better and safer procedure for eye surgeons of average ability than any intracapsular method so far devised.

*De Schweinitz, George.*—Believes cystotome should be abandoned. Uses capsular forceps. Believes Knapp's method the best intracapsular method, if advising an intracapsular operation. Personal experience too limited.

*Gradle, Harry S.*—Has abandoned intracapsular methods owing to slow closure of wounds, ruptured capsule, drawn pupils, poor cosmetic results. Regards combined capsulotomy method only safe procedure.

#### SUMMARY

The above procedures reflect much of the writer's views regarding the cataract problem. It is to be remembered, however, that expedience and community conditions govern or modify many accepted principles of eye surgery. It is almost axiomatic in eye surgery that subsequent complications are minimized by the fewer steps to an operation and the least amount of trauma inflicted.

It may be, perchance, that dealing with certain types of cataract, or with certain classes of patients, such as Colonel Smith came in contact with, or clinic patients in large cities of this country, the intracapsular operation may fulfill the needs of a limited number. However, in the practice of the ophthalmic surgeon of average ability, or in the average community, it seems to the writer very ill advised to undertake such a procedure.

Goodrich Building.

#### DISCUSSION

*LLOYD MILLS, M. D.* (609 South Grand Avenue, Los Angeles).—Patients have the right to expect that every measure which safeguards them from complications during and after cataract extractions will be used provided the risks of operation are not increased thereby. Certain cases clearly are capable of almost ideal operative measures such as the various forms of extraction within the capsule may be in skilled hands. Other cases manifestly demand combined extraction.

Men who do ten or twelve cataracts a year never acquire the skill or judgment necessary to separate these cases. It is generally recognized that the safest procedure for these occasional operators is the combined extraction done with blocking of the facial nerve. It is not clear how many surgeons still can persist in leaving their cataract wounds open to infection and to all the complications which delayed healing and unusual strain can cause during convalescence. Nowhere else in the body do surgeons have the temerity to leave the wounds of vital areas open to any and every possible mischance. To prevent this the use of the full conjunctival flap and its complete suture have been introduced and are unqualifiedly urged by those who have had sufficient experience with both methods to know the protective value of the full suture. By its means secondary infection and secondary glaucoma almost have been eliminated and practically all other complications save those arising from the retention of lens material have been reduced almost to the vanishing point. Most of the younger

eye surgeons throughout the world are adopting this measure, which is applicable to nearly all forms of adult cataract operation.

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*DOHRMANN K. PISCHEL, M. D.* (490 Post Street, San Francisco).—In discussing the advantages of the capsulotomy method of lens expression we must certainly emphasize the important advances of the past decade or two, which have so vastly improved the end results. Therefore I was surprised that the author dismissed the subject of capsule forceps with a few sentences. The importance of this subject is brought out in one of the replies to his questionnaire which the author quotes as follows: "De Schweinitz believes cystotome should be abandoned. Uses capsule forceps."

The advantages of the capsule forceps can hardly be overestimated, and should certainly be stressed. The removal of a large central piece of the anterior capsule accomplishes several things. It removes that portion of the capsule just in front of the pupil which furthermore might be opaque and thus interfere with good vision. By substituting a lacerated wound in the capsule for an incised one, it does not allow the capsule to rapidly close again and thus seal off the retained cortex which will form a dense secondary cataract. Naturally, with a proper hole in the anterior capsule, it never closes in the pupillary area. Thus the aqueous has free access to any retained lens cortex there and quickly absorbs it. The result is the appearance of a black pupil in a surprisingly short time, even when a large amount of cortex has been left behind. The contrary was true when a linear incision was made with the cystotome, for the capsule wound was quickly sealed and no absorption of cortex could take place.

I do not believe that there are any valid objections to the use of the capsule forceps. As they can be withdrawn very easily and quickly, the danger of a sudden upward movement of the eye is less when they are employed than when the cystotome is used. The possibility of luxating the lens into the vitreous cavity by too great pressure on it when attempting to grasp the anterior capsule is so remote when done properly that it can be entirely disregarded.

The high incidence of secondary cataract after capsulotomy operations of the older type (so heavily stressed by the intracapsular advocates) has always been considered the chief disadvantage of this operation. Its prevention has been eagerly sought by many means. Here we have the crux of the whole situation. With the capsule forcep technique the complication of secondary cataract is practically removed, and with it such unnecessarily high incidence of operations for after-cataracts as 75 per cent will disappear. Twenty to 25 per cent will then be much nearer the correct figure.

In closing, I might also mention the use of Hess' spoons in the delivery of retained cortex. This instrument was designed by that master operator, the late Professor Hess of Munich. These broad spoons enable one to massage out considerable material and thus hasten convalescence.

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*DOCTOR HARBRIDGE (Closing).*—The writer wishes to express his appreciation to the colleagues who have discussed his paper. He wishes especially to thank Doctor Pischel for the emphasis he has placed upon the importance of doing a proper capsulotomy. The use of capsule forceps perhaps should be the procedure of election. The author described the technique he has been accustomed to use and therefore described the method which had for its object the same end as suggested by Doctor Pischel, namely, the obliteration of the central portion of the anterior capsule, thus allowing more complete absorption of any remaining cortex.

## BLADDER CARE AFTER ABDOMINAL OPERATIONS\*

By ROBERT GLENN CRAIG, M. D.

San Francisco

DISCUSSION by Homer C. Seaver, M. D., Los Angeles; H. K. Bonn, M. D., Los Angeles; William Henry Gilbert, M. D., Los Angeles; H. N. Shaw, M. D., Los Angeles.

THE technique of surgical operations is now becoming so well standardized that further improvement along this line will probably be slow. As this is becoming better recognized, more attention is being directed to the preoperative and postoperative care to lessen the postoperative morbidity and to make more pleasant the postoperative convalescence. One source of anxiety to the surgeon, and more especially to the gynecologist, is the care of the bladder immediately after operation. As evidence of this anxiety we have only to recollect the frequency with which the question, "Has the patient voided?" is asked during the first twenty-four to forty-eight hours after operation, and the sigh of relief, audible or inaudible, when the answer is in the affirmative. In gynecology, where the operations are carried out in close proximity to the bladder, or which may involve that organ, distention of the bladder is more apt to cause a disturbance in the postoperative anatomical relations which may lead to serious postoperative complications. For this reason, the gynecologist has not felt justified in allowing the bladder to become overdistended before catheterization, as can be done with safety after operations within the upper abdomen, thus increasing his anxiety.

While it has been stated that it is difficult to infect a normal bladder by the use of a catheter, it is undoubtedly true that any procedure which will lessen the incidence of postoperative catheterization will also lessen the incidence of postoperative cystitis.

### PROCEDURES PROMOTING NONRETENTION

Numerous procedures have been and are being advocated which will cause the patient to void after a postoperative retention with distention has occurred. These may be grouped under three headings:

1. Intravesical instillations.
2. Internal medication, either oral, subcutaneous, or intravenous.
3. Psychic stimuli.

None of these recommendations are directed primarily to the prevention of catheterization,

thus causing the patient to void spontaneously before the bladder becomes distended. This report is concerned with the prevention of a distention rather than with the correction of a retention.

### CATHETERIZATION AND POSTOPERATIVE CYSTITIS

The results to be reported were first called to our attention during a study of postoperative cystitis begun in Baltimore in 1925. At that time it was felt that catheterization was of major etiologic importance in postoperative cystitis and that an instillation given at the time of catheterization would probably lessen the incidence of infection. The commoner solutions, such as silver nitrate, argyrol, and mercurochrome, were used. We were pleasantly surprised to find that the necessity for catheterization after mercurochrome was much less than after any other solution used. The results after the use of mercurochrome to prevent postoperative catheterization are given in this paper. In order that a patient may have sufficient fluid in the bladder to void after an operation, it is necessary that the fluid intake within twenty-four hours after operation be sufficiently great. We now take measures to increase this intake by allowing the patient fluids before operation and by giving him fluids immediately after operation.

### CLASSIFICATION OF RESULTS

The results which are to be reported have been divided into four groups:

1. Control group, in which nothing was done—ninety-nine patients.
2. Group two, in which one ounce of one per cent mercurochrome was instilled into the bladder at the time of operation—seventy-eight patients.
3. Group three, in which one ounce of one-half per cent mercurochrome was instilled into the bladder at the time of operation—ninety-three patients.
4. Group four, in which one ounce of one-half per cent mercurochrome was instilled into the bladder at the time of operation plus one liter of fluid per rectum—thirty-nine patients.

All the patients reported in these groups had laparotomies in which some pelvic operation had been done.

### COMMENT ON GROUPS

1. *Control Group*.—Ninety-nine patients were observed in the first control group in which nothing was done to prevent catheterization. These patients alternated with those who received an instillation. It is necessary to be familiar with the routine followed on the gynecological service of the Johns Hopkins Hospital at the time these patients were observed. During this period all patients who did not void at least 100 cubic centimeters of urine at one time within eight hours after they were returned to the ward, were catheterized. They were further catheterized every eight hours if they did not void 100 cubic centimeters at one time within a similar period. In other words, at no time immediately after operation, was the bladder allowed to be distended with

\* From the Department of Gynecology, Johns Hopkins University and Hospital, Baltimore, Md.

I would like to take this opportunity to thank Dr. Thomas S. Cullen, Professor of Gynecology, for the privilege of undertaking this study on his service. I am also indebted to members of the resident house staff and to Miss Ruth Doran for their valuable assistance.

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urine. As sutures are often placed near and the dissection is carried close to the bladder in gynecological operations, this is considered a wise precaution.

2. *Group Two Received One Per Cent Mercurochrome as a Bladder Instillation.*—In the second group of seventy-eight patients who received one ounce of one per cent aqueous solution of mercurochrome immediately after operation, it was found necessary to catheterize eighteen patients, or 23 per cent. The same routine was observed as in the control group. Some of these patients, after the instillation of one per cent mercurochrome complained of bladder irritation and a desire to void. These always obtained immediate relief from symptoms by a bladder irrigation of 50 per cent saturated boric acid solution, and usually continued to void spontaneously. Hemorrhage or blood in the urine in small amounts occurred in about two per cent of the patients observed. It was thought that this was due to the irritative effect of the mercurochrome on the bladder mucosa. For this reason one-half per cent mercurochrome was substituted for the one per cent mercurochrome. No blood has been found in the urine in any of these cases.

3. *Group Three Received One-Half Per Cent Mercurochrome as a Bladder Instillation.*—In the third group of ninety-three patients, mercurochrome (one-half per cent) was given as a bladder instillation and it was found necessary to catheterize only eight patients, or 8.6 per cent. It is necessary to state that the routine observed in the first two groups was not followed in this group. A slight change was made in that the initial time which was allowed to elapse before catheterization was changed from eight to twelve hours.

4. *Group Four Received One-Half Per Cent Mercurochrome and Additional Fluid by Rectum.* In the fourth group of thirty-nine patients who received one liter of two per cent soda bicarbonate solution containing sixty cubic centimeters of mineral oil, per rectum, in addition to a bladder instillation of one ounce of one-half per cent aqueous solution of mercurochrome, it was necessary to catheterize three, or 7.7 per cent. The same routine was observed as in the third group.

TABLE 1.—*Showing the Results Obtained by a Bladder Instillation of Mercurochrome*

Group	Patients Observed	Catheterizations No. Pts.	Necessary Per Cent
1. Control group .....	99	60	60
2. Bladder instillations of one per cent mercurochrome .....	78	18	23
3. Bladder instillation of one-half per cent mercurochrome .....	93	8	8.6
4. Bladder instillation of one-half per cent mercurochrome plus one liter of rectal fluid .....	39	3	7.7

The figures given above represent the number of patients in whom one or more catheterizations were necessary and does not represent the proportionate decrease in the actual number of

catheterizations, as patients catheterized once not infrequently had to be catheterized three to four times. It was further observed that an instillation of mercurochrome after a catheterization decreased the necessity for subsequent catheterizations.

TECHNIQUE

The technique in all of these cases consisted in the instillation into the bladder on the operating table immediately after operation, of one ounce of the mercurochrome solution. Since then, in many cases we have made the instillation at the time of catheterization at the beginning of the operation and have noticed no difference in the results.

The rectal instillation of fluid was given on the operating table while the patient was still under the anesthesia. If the flow was slow, it could be easily accelerated by a slight Trendelenberg position. It is absolutely necessary that the patient be kept under anesthesia while the fluid is being given. In less than one per cent of the patients treated was any of the fluid expelled.

COMMENT

No scientific explanation can be made as to why an instillation of mercurochrome should cause a patient to void spontaneously. It is assumed that with the dissection of the bladder causing trauma, with disturbance of its nerve supply, with the anesthetic, and with the lowered resistance at the time of operation, there is a loss of muscle tone in the bladder wall so that postoperative distention occurs quite easily. It is felt that the action of the mercurochrome is an irritative action directly on the bladder musculature and that this restores the muscular tone before there is sufficient fluid in the bladder to cause an overdistention. Further observation is necessary before this point can be determined with accuracy.

The advantages of decreasing the necessary number of postoperative catheterizations is obvious, and this must of necessity result in a decrease in the incidence of postoperative cystitis. Recently a number of articles have appeared in the literature which apparently minimize the danger of postoperative catheterization, some even stating that it is impossible to infect a normal bladder or kidney, even if pure cultures of pyogenic organisms are injected into the bladder. Such statements cannot be accepted until more conclusive experimental work has been done. Furthermore, we are here dealing with abnormal bladders, as is indicated by the difficulty in voiding. It is also obvious that by decreasing the number of postoperative catheterizations the postoperative comfort of the patient is increased and the nursing care is proportionately decreased.

Undue emphasis cannot be placed upon the importance of sufficient fluid intake on the day of operation. We now give fluids freely, including coffee and orange juice, on the morning of operation up to within one hour of the operation. I usually insist on the patient taking at least 500 cubic centimeters on the morning of operation.



I have not seen this cause vomiting with the anesthetic. About 1200 to 2000 cubic centimeters of fluid can be easily given per rectum immediately following the operation and this usually is a sufficient quantity for the day of operation, so there is no necessity to force fluids per mouth or to disturb the patient with repeated small rectal instillations.

#### SUMMARY

1. This series of cases demonstrates that a bladder instillation of mercurochrome decreases the necessity for postoperative catheterization, and *per se* decreases the probability of postoperative cystitis. It prevents the occurrence of bladder distention, rather than the correction of a retention.

2. Four groups of patients were studied:

(a) A control group of ninety-nine patients was observed in whom it was necessary to catheterize sixty, or approximately 60 per cent.

(b) In a group of seventy-eight patients who received one ounce of one per cent mercurochrome into the bladder at the time of operation, it was necessary to catheterize eighteen, or 23 per cent.

(c) In a third group of ninety-three patients who received one ounce of one per cent mercurochrome as a bladder instillation, it was necessary to catheterize eight, or 8.6 per cent.

(d) In a group of thirty-nine patients who received one liter of fluid per rectum in addition to the one-half per cent mercurochrome in the bladder, three, or 7.7 per cent, were catheterized.

3. Fluids per rectum, one to two liters given under anesthesia, further increase the number of patients who void spontaneously.

490 Post Street.

#### DISCUSSION

HOMER C. SEAVER, M. D. (1930 Wilshire Boulevard, Los Angeles).—This paper offers an increase in comfort to the woman who has been subjected to surgery. On our services at the Los Angeles General Hospital, Doctor Shaw and I have adopted Doctor Craig's technique. We have catheterized preoperatively because of the technical advantages in operating when the patient's bladder is empty. Immediately following catheterization, one ounce of one-half per cent mercurochrome is instilled in the bladder.

I am able to report on three hundred cases in the majority of which extensive intrapelvic surgery was done and in many instances a combination of laparotomy and plastic work. In the first one hundred it was necessary to catheterize postoperatively but three patients. In a second group of forty patients none had to be catheterized. Of the last one hundred and sixty patients forty-three were catheterized. The average number of times these patients had to be catheterized was slightly under three. Considering these as one group, as they rightly should be since they were consecutive cases, it was necessary to catheterize postoperatively forty-six out of three hundred patients, or 15.3 per cent, which is a higher incidence than occurred in Doctor Craig's third group, but certainly is more satisfactory than the control patients who did not receive the instillations. Of the three hundred patients there were eight, or 2.6 per cent, who developed a postoperative cystitis. The only other complication was a rather serious hematuria, which occurred on the second postoperative day in

two patients. This, however, disappeared spontaneously within a few days.

In view of the facts, I believe that Dr. Glenn Craig's technique should be adopted as a routine measure in all cases of pelvic surgery.

✽

H. K. BONN, M. D. (520 West Seventh Street, Los Angeles).—This article is most timely and of considerable practical importance. As stated in the paper, the report is concerned with the prevention of a distention of the bladder rather than with the correction of a retention. I have used the procedure since Doctor Shaw made a report of its use to the surgical section of the Los Angeles General Hospital and am firmly convinced of its value. Personally, I favor the use of one-half per cent mercurochrome solution for the bladder instillation and permit the patient a leeway of ten to twelve hours before catheterization is done, the majority voiding before ten hours have elapsed. But I do not regard eight hours as a retention.

Not so many years ago it was not an uncommon practice to catheterize patients who had had a perineorrhaphy or other plastic vaginal work done for a period of ten days, under the mistaken impression that only in this manner could a good result be achieved. A real danger was present in these cases of repeated catheterization, namely, that of acute pyelitis, and a pyelitis can appear rather quickly after catheterization. Such a pyelitis is still possible in this day, but the use of mercurochrome instillations almost negatives such an additional complication. Following the removal of hemorrhoids, it is not uncommon, as is well known, for the majority of patients to fail to void. Here the mercurochrome instillations are of very definite value, as I have proved to my own satisfaction.

✽

WILLIAM H. GILBERT, M. D. (305 Medico-Dental Building, Los Angeles).—Postoperative catheterization constitutes a menace to the patient and adds considerably to the postoperative discomfort. Anything that will lessen this is a most desirable procedure. I am not of the opinion that postoperative catheterization under proper precautions causes cystitis. It does, however, add to the liability of that complication. Without doubt overdistention of the bladder is the greatest menace we have to contend with, and I believe that the bladder should not go unemptied longer than eight hours. It has been my custom for a number of years to administer, preoperatively, large quantities of water and orange juice. This, coupled with plenty of water by rectum after operation, yields excellent results and causes the patient to have very little annoyance in the postoperative use of the catheter.

I am satisfied that the method as laid down by Dr. Glenn Craig is very valuable and should become a postoperative procedure with all of us. It will unquestionably lessen the frequency of catheterization and the prevalence of postoperative bladder infections.

✽

H. N. SHAW, M. D. (901 Pacific Mutual Building, Los Angeles).—Two years ago I visited the Johns Hopkins Hospital and saw Dr. Glenn Craig's work there. I was greatly impressed with its value and Doctor Seaver and I adopted the method, both on our General Hospital service and in private practice. In the first eighty-two cases we had no catheterizations, with only three in the first hundred. Two of these were extensive cystocele operations, which usually have to be catheterized for days, and in these cases the period of catheterization was considerably lessened. Unfortunately they copied our instructions wrongly in the book of operating-room directions at one of the hospitals, and our patients were given two per cent instead of one per cent solution. Two of the patients had severe symptoms, one with alarming hematuria and another with considerable amounts of pus and blood in the urine. These symptoms cleared up very quickly. During the past eighteen months we have used one-half per cent instead of one per



cent solution, and while not quite so effective as the stronger solution, we have had no cases of hematuria.

From our experience in over one hundred patients, we are convinced that the instillation of one-half per cent mercurochrome into the bladder before or at the end of operation, will practically eliminate postoperative catheterization.

Every surgeon knows that inability to void after operation is a cause of great discomfort to the patient, and that the catheterization may cause a troublesome urinary infection. Cabot has found that a bladder which has been overdistended will be infected by a catheter, regardless of aseptic precautions, while it is almost impossible to infect a partially filled bladder. For this reason he recommended catheterization within a few hours of operation, repeated at comparatively short intervals, to prevent overdistention and the inevitable infection. The less disturbance of the patient after a serious operation the better, and any procedure which can eliminate catheterization is bound to be valuable.

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DOCTOR CRAIG (Closing).—It is gratifying to know that the procedure recommended in this paper has proved satisfactory in the hands of others. Doctor Shaw had told me of his good results and I am indebted to him for his suggestion that I present this paper.

I am in complete accord with Doctor Bonn's statement that an acute pyelitis can appear very quickly after a bladder catheterization and infection, consequently to prevent it is of major importance. There still seems to be a diversity of opinion as to the potential dangers of bladder infection, following catheterization under aseptic conditions. Doctor Shaw has called attention to Cabot's work with distended bladders, and I feel there still is an ever present danger of infection when such bladders are catheterized. Any method which will prevent an overdistention will lessen the probability of infection even when a catheterization is necessary.

While the instillation of mercurochrome is a simple thing to do, it does definitely decrease the necessity for postoperative catheterization and lessens the danger of cystitis and pyelitis. This is of major importance.

## UROLOGY—SOME GENERAL OBSERVATIONS\*

By WILBUR B. PARKER, M. D.  
Los Angeles

UROLOGY, a branch of the art and science of medicine, may be said to be a number of specialties within a specialty. It presents a field so broad in its lines of development that, as a collective group, no man can hope to attain perfection. Urology will always offer opportunities for advancement. The rapid strides in scientific procedure have erased forever the stigma that our specialty was once the favorite choice of the charlatan. In our own country, urology owes an everlasting debt of gratitude to the pioneers in our specialty, several of whom honor us today with their presence, and who in the trying days of the past had the courage to train and announce themselves as specialists in urology. The honest and efficient labors of these colleagues had much to do with giving urology the place it occupies among present-day specialties in medicine. Today the standards laid down by these men make

possible entrance into the specialty only after studious application and practice.

### SOME FUNDAMENTAL NEEDS

I cannot conceive, in the field of medicine, a man more deserving of emulation than the honest, properly trained urologist. The lack of this qualification of honesty mars the records of a few men of recognized ability who are seemingly motivated by a desire for pecuniary gain and who use bizarre methods of technique designed for self-aggrandizement. Such urologists cast the only remaining reflection upon our specialty as it exists today.

We may well consign to the rank of charlatan any man practicing urology who is dishonest, and by contrast point with pride to the man of even most mediocre ability whose training and sincerity cannot be questioned.

It is regrettable to note that some contributors to recent urological literature fail to give rightful recognition to former writers through mention of proper references. In many journals, during the past year, apparently original articles on subjects especially referable to diagnosis and methods of technique have appeared which were fully covered and adopted years before by men much more able than many of the latter day writers. Those who are guilty show either an inexcusable lack of review of past literature or willful plagiarism.

Certain other contributors, who seem to have psychologic as well as urologic training, by omission to tabulate untoward results and through incomplete quotations of the opinions of other men, have helped bring about with some of our colleagues the adoption of methods wholly inadequate and obnoxious. These unfortunate practices will naturally eliminate themselves and in the end act to the disadvantage of those who thus offend.

It is a well-known truism that some day every successful man must stand upon his own feet. Nevertheless, we still observe some of the younger men who have forgotten the time-honored proverb that "No school ever made a man, but many a man has made a school." The failure to remember this proverb, especially when such lack is combined with avidity at the beginning of the practice of this chosen specialty, has brought upon a few of the graduates of our greatest clinics the accusation of at least being erratic, a reflection unjust to their able preceptors.

### EXPLOITATION OF THE PROFESSION

The entire medical profession has continued throughout the year to be unmercifully exploited by manufacturers of various modalities and specifics, and no immediate relief for this exploitation can be seen. Therefore it behooves the members of this urological section to be especially discerning in the choice of means for the prevention and treatment of venereal diseases. The Council on Pharmacy and Chemistry of the American Medical Association is to be highly commended for past endeavors and deserves ex-

\* Chairman's address, Urology Section, California Medical Association, at the fifty-eighth annual session, May 6-9, 1929.

tended means for more thorough investigation in its work of passing on new preparations.

Insurance companies of all types tenaciously hold to their viewpoint that medical men should furnish them complete reports of patients formerly under their care. They extend their so-called coöperation by obtaining a legal consent for such information from their prospects, but make no provision for remuneration of the physician. When we consider that the index of health, interpreted by many insurance companies, depends in good part upon a family history and urinalysis, it is little wonder that medical men resent this almost impertinent practice. This procedure has had no small part in nurturing the establishment of innumerable urinalysis bureaus, commercial to the nth degree.

Let us cite an instance of one of these momentous opinions, rendered by a urinalysis bureau to a patient in whom the urine was normal, except for the presence of a few leukocytes and an excess of indican. Said the director of the bureau in question:

"As I go over your reports, I see indican continues unchanged. This indican is only one of the many intestinal poisons that are absorbed from the intestinal tract. Such poisons sooner or later break down the defensive forces of the liver and enter the blood stream. When these poisons reach a sufficient degree of concentration we experience an acute illness. This illness is commonly called a bilious attack. If the poisons are not in quantity sufficient to cause an acute illness, degenerative conditions of the blood vessels and kidneys may occur which result in high blood pressure. There is a mass of accumulating evidence to show that these intestinal poisons predispose to or possibly cause cancer.

"With these thoughts in mind, I hope you will more seriously consider the kind and character of food you eat and the amount of exercise you take."

The patient's reaction on receiving the above was: "Am I condemned or is this gentleman misleading me?"

This patient seven years previously had been salvaged by us from a threatened renovesical degeneration, due to filiform urethral strictures, prostatitis, and vesiculitis. At that time he was experiencing difficulty in holding a twenty dollar a week position. Today, at the point of best possible efficiency, he is national sales manager for a large manufacturing company.

Such bureaus, which exploit the "five elements of positive health—inheritance, nutrition, sun exposure, body posture, and symmetrical muscular power—that contribute to the development of a sixth personality," are referred to in the exemplary article of Lovell Langstroth, San Francisco, published in the September 1928 issue of CALIFORNIA AND WESTERN MEDICINE.

#### OTHER ELEMENTS

The shopping patient, a constant annoyance to the members of our specialty, should be vigorously discouraged, even to the point of nonacceptance of his case. The efforts of the shopping patient, when added to the unwise or, if you choose, unethical references of physicians to former consultants, have resulted in irreconcil-

able breaches between men who were formerly at least tolerant of one another.

The attendance of members at our sectional meetings has been governed by the willingness of contributors to produce articles of real value. The percentage of absences may be due perhaps to the fact that possibly a number of our members are suffering from one of two ailments, known as superiority and inferiority complexes.

A fee schedule capable of proper interpretation between contracting parties has as yet not been presented. This is not to be wondered at, for surgical service is not merchandise. We must admit that the laity have important rights as to the amount to be paid for services rendered. The subject is worthy of close study.

Our comments on these matters should not brand us as overpessimistic for, as a matter of fact, we all know that each year brings forth an increased fraternalism and a realization of our great responsibilities toward preventive medicine.

1107 Brack Shops Building.

### LONG WAVE X-RAYS IN DERMATOLOGY\*

By LAURENCE R. TAUSSIG, M. D.

San Francisco

DISCUSSION by George D. Culver, M. D., San Francisco; William E. Costolow, M. D., Los Angeles; Moses Scholtz, M. D., Los Angeles.

IN 1925 Bucky,<sup>1</sup> amplifying the work done by Schultz and others in Germany and by Stern in this country, published the first report of his work with oversoft x-rays. These rays have a wave length of from 1.5 to 2.0 Angstrom units, and he stated that they differed biologically and physically from x-rays. He designated them grenz rays to convey the impression that they lie between the ultra-violet band and the true x-ray band in the spectrum.

#### APPARATUS USED

The apparatus used in the production of grenz rays consists of a special interrupterless transformer, designed to supply a maximum of twelve kilovolts. The principle of this transformer does not differ materially from that of the usual type by which the modern x-ray tube is activated. The tube used is similar in principle to the Coolidge tube, but differs in having a window of Lindeman glass through which the rays pass. This is necessary because the very soft rays would be absorbed to a large extent by ordinary silicate glass. Lindeman glass is a lithium borate glass. These tubes are water-cooled, and, on account of the friability of the Lindeman glass window, are usually protected by a metal sheath. There are two tubes available, the Müller tube and the Siemens tube. The first has an anode of the hollow cone type and the rays are projected from the end of the tube, while the second has an anode similar

\* From the Department of Dermatology, University of California Medical School, San Francisco.

\* Read before the Dermatology and Syphilology Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



in design to that of the conventional x-ray tube with the window at the side. An erythema appears in twenty-four hours if a three-minute exposure is given, using 8 kilovolts, 8 milliamperes, at 6 centimeter target skin distance. This amount of radiation is considered empirically as one unit, and doses of from one to two units are given as a rule and repeated at two to four-week intervals for a few doses. In the course of a few weeks the erythema is replaced by a varying grade of pigmentation, which remains for some months.

#### BUCKY'S EVALUATIONS

As a result of his laboratory researches Bucky reported that the half absorption value of grenz rays was about 0.46 millimeters in water and that 2 millimeters absorbed over 90 per cent of the rays. Assuming the thickness of the skin to be about 1.5 millimeters, he concluded that only very inconsiderable amounts of radiation could reach the papillary and subpapillary layers. He stated that these rays were devoid of danger even when used to the extent of a very severe reaction on account of the fact that complete destruction of the basal layer of the epidermis could not occur. He is quite insistent, however, that tensions of ten kilovolts should not be exceeded, having seen unpleasant after-effects following the use of higher voltages. Bucky<sup>2</sup> also found that with small localized exposures to grenz rays a considerable general effect occurred. The most striking feature was a rapid and marked drop in the white cell count which as rapidly returned to normal. He explained this as being due to the effect of the rays on the autonomic nervous system. The erythema caused by these soft rays develops sooner than is the case with the ordinarily used x-rays. From these and other observations Bucky concluded that he was dealing with a ray physically and biologically different from the x-ray and designated it the grenz ray to indicate that it lay on the border line below x-rays.

#### OTHER VIEWPOINTS

Most of the subsequent investigators object to considering these rays as other than unusually long wave x-rays, maintaining that the biological and physical features were quite similar. E. Uhlmann<sup>3</sup> and others were able to show actual tissue destruction in animals given relatively large doses of the soft rays. He concluded that these rays are not devoid of danger if used in extreme dosage. Martenstein and Granzow-Irrgang<sup>4</sup> found that intensities of approximately one-third of the effective skin dose penetrated to the depth of the subpapillary layer of the skin. Eller<sup>5</sup> objects to the term "grenz rays" and substitutes for it that of "supersoft roentgen rays (2 Å)" as being more nearly descriptive of the true nature of the rays. He produced radiographs of metal objects on dental films, with filters as thick as one millimeter of aluminum. He used exposures approximating those used in producing an erythema on human skin. His results were confirmed by Dr. Charles Lerner of New York. Hirsch, quoted by Eller, published a table in which he shows that

the shortest wave length produced by a peak voltage of ten kilovolts is 1.24 Å. Gabriel<sup>6</sup> showed that the same drop in the white cell count occurred with short-wave rays as with the grenz rays, the only difference being that it was somewhat slower in developing and took longer to return to normal. Attempts to standardize dosage on the basis of physical measurements have been unsatisfactory so far.

A wide divergence of opinion concerning the usefulness of this wave length is found in the literature. Bucky is by far the most enthusiastic advocate, having reported good results in a large number of dermatologic and general medical conditions, and in addition maintained that the method is absolutely devoid of danger of late sequelae, so much feared in x-ray therapy. Though a number of writers have detailed their reasons for believing that there is a possibility of producing late unfavorable sequelae, none of them have reported experiencing any of these late results. At the 1927 meeting of the Deutschen Dermatologischen Gesellschaft, a number of members who had had experience with this method of treatment expressed their opinions as to its field of usefulness. Artzt and Fuhs<sup>7</sup> reported good results in the treatment of tuberculosis verrucosa, erythema induratum, hidrosadenitis axillaris, lichen chronicus of Vidal, mycosis fungoides and basal cell carcinoma. Schreus<sup>8</sup> reported no bad effects up to that time other than a pigmentation, which lasted a considerable time. Uhlmann<sup>9</sup> found this method striking in the treatment of psoriasis, including that of the scalp, but concluded that these soft rays were not superior to the x-ray in eczema and neurodermite, inferior in the treatment of tinea, and stressed the fact that they were not to be considered as entirely harmless. Rottmann<sup>10</sup> found changes in the blood vessels which convinced him that there was a possibility of late ill effects. Gabriel<sup>11</sup> reported finding changes in the deep layers of the skin of animals and humans. Scholtz<sup>12</sup> considered the rays similar in action to x-rays and thought that ill effects were unlikely with careful dosage. He considered that the practical use was limited on account of the danger of breaking the Lindeman glass window and by the small field that could be treated at one time. Werther<sup>13</sup> stated that by overdosage it was possible to produce epilation and long-standing hyperesthesia, but reported good results in pruritus and hyperkeratosis of the senile type. He had not observed a single case of cancer which had been cured. He felt that the method was impractical for eczema and psoriasis. Bucky<sup>14</sup> reported that he had treated some three hundred cases, some as long as four years previously, and stressed his good results in the treatment of epithelioma. In another article Bucky<sup>2</sup> reported that "many skin diseases react wonderfully to this treatment, such as eczema of all kinds, acne rosacea, lichen planus, pruritus ani; psoriasis came back after a short time." He had equally good results with lupus, tinea, sycosis, warts, mycosis fungoides, Kaposi's disease, and epitheliomata. Eller<sup>5</sup> reported good results in dermatophytosis, Duhring's disease,

basal cell epitheliomata, lichen planus hypertrophicus, perlèche, tinea capitis, small early keloids and sycosis barbae. He stresses the usefulness of the grenz rays in the treatment of epitheliomas of the lids, having found no damage to the eyeball, with large doses in spite of the fact that no special precautions were taken. In an experience of over two years he has seen no sequelae similar to those produced by erythema doses of shorter wave x-rays, but warns against overdosage. The only case showing these late sequelae was one presented at the New York Dermatological Society by MacKee<sup>15</sup> in 1928. Areas of slight telangiectasia and depigmentation had developed in areas treated six months previously with mild doses of grenz ray. The patient was an inveterate psoriatic who had received much therapy, including x-ray, ultra-violet light, and arsenic. The areas exposed to the soft radiation, however, had presumably not been previously treated with x-ray. It is reasonable to believe that this patient's skin had become unusually susceptible to external influences from previous therapy. Several writers warn that the effects of the soft radiation are accentuated when applied to areas previously treated with roentgen rays.

#### PERSONAL OBSERVATIONS

In the past nine months I have used the ultra-soft x-rays on a variety of dermatological conditions. The number of patients treated was intentionally small because it was felt that conservatism was the safest policy in dealing with a wave length, the very late results of which might possibly be unpleasant. By experiment it was found that, using a Siemens tube activated by a special Wappler transformer, four minutes exposure with 8 kilovolts, 8 milliamperes, at 8 centimeter target skin distance produced an erythema on the flexor surface of the forearm which appeared within twenty-four hours. The area became pigmented in the course of a few weeks and this pigmentation persisted for months. This dose was considered as one unit, and nonmalignant conditions were given one unit or less at a sitting while the malignancies treated were given two units at two-week intervals. Six cases of basal cell epithelioma were treated. All were long-standing, extensive lesions with bone involvement and all had received a great variety of treatment including radium, x-ray, curette and cautery, and even arsenic paste. None of these was benefited though treatment was persisted in for a considerable period of time in each case. Three patients with verrucae vulgaris were treated without benefit. One patient with an extensive and resistant keratoderma of the feet (probably tinea) failed to respond. Two cases of senile keratoses cleared rapidly. Two cases of lupus vulgaris, both extensive and resistant to other forms of treatment, failed to improve materially. Of the patients with palmar eczema, one cleared and remained well while the other improved but showed some recurrences, as it had previously, under x-ray and ultra-violet light. One case of lichenification cleared while another flared up and became ex-

tensive and acute. I have treated no patients with basal cell epithelioma that I felt were curable by other better known means. A number of these will be treated in the near future, selecting at first those which present some measure of difficulty, such as lesions close to the eye.

#### CONCLUSIONS

1. The grenz rays described by Bucky are to be considered as x-rays of very long wave length, differing from the rays previously employed in dermatology only in quality and quantity rather than in kind.

2. These supersoft x-rays offer another means for combating skin disease, but will probably not supplant the shorter wave lengths though further experience may show them to be superior in some particular instances.

3. The unpleasant late sequelae which occur following overirradiation with short wave lengths do not occur with the doses so far employed. The safety of repeated exposures is questionable and can be proved only by extensive experience.

384 Post Street.

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#### DISCUSSION

GEORGE D. CULVER, M. D. (323 Geary Street, San Francisco).—The pleasing feature of Doctor Taussig's paper is that of fairness in judgment and conservatism in conclusions. If it could have been possible in the last two decades to have had conservatism as the watchword in the use of radiant energy there would be fewer heartaches and less recrimination now.

I know nothing from personal experience about the so-called grenz rays, and am perfectly willing to be



criticized for offering this brief discussion. However, it is not the first time something new in radiant energy or some new method of its use has been offered as being near to fool-proof. There are few of us that have done any considerable work along such lines that are blameless. I concede that I am not in the ranks of those who can look back without regret.

It would seem that overenthusiasm with the over-soft x-rays may also leave its trail of disaster unless the check of clear judgment and selective usage is as closely followed, as it should be with the x-ray and radium as we know those agents now. Doctor Taussig's admonitions are worth while.

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WILLIAM E. COSTLOW, M. D. (1407 South Hope Street, Los Angeles).—Doctor Taussig deserves credit not only for pioneering this new form of radiation therapy on the Pacific Coast, but also for his conservative attitude toward a new method of treatment. He has clearly described the apparatus, its technique of production, and the physics of the grenz or super-soft x-rays.

The mechanical simplicity and electrical safety to both the patient and physician, together with the fact that physical measurements and standardization of dosage are not necessary as with the ordinary short-wave x-ray, causes the grenz ray apparatus to be desirable for the average dermatologist who does not have available the services of a trained physicist. Nevertheless, this apparatus must be considered as a type of x-ray apparatus, and care should be taken not to produce overdosage. As brought out by Doctor Taussig, radiographs of metal objects have been produced through filters with these rays. Hence, the rays cannot be considered as entirely without danger if prolonged and repeated exposures are given.

At the Soiland Clinic in Los Angeles, we have been using the grenz or supersoft x-rays since December 1928. The apparatus which we have employed is the "Dermix" transformer, manufactured by Koch and Sterzel of Dresden, with the Müller tubes from Hamburg. We have not treated any cases of skin malignancy with the supersoft x-rays and do not intend to for the present. We believe that if radiation is to be used in skin malignancy heavily filtered radium should be chosen. It does not seem advisable to use a method of radiation so superficial in its action as the supersoft ray method for the destruction of malignant lesions which, although often appearing superficial, really have deep extension.

In our experience the most satisfactory lesions for the grenz ray therapy have been senile keratoses. In the treatment of a considerable number of these lesions we have found the supersoft rays almost specific. Of four cases of lupus vulgaris treated, one seems entirely well, one considerably improved, and two unimproved. Several patients with localized areas of eczema have been relieved. It is only possible to treat relatively small areas with the grenz apparatus, which is quite a disadvantage in some cases. One case of pruritus ani was completely relieved, and one case of moderately localized tinea capitis was entirely cured with two treatments. In our patients who were treated with the supersoft rays, we have not observed any evidence of later skin atrophy or telangiectasia, such as may follow short-wave x-ray radiation. However, as has been brought out, this is a later possibility and care should be used in prescribing repeated doses.

The supersoft or long wave x-rays certainly deserve a place in dermatological treatment and should be given a thorough trial, especially in the superficial nonmalignant conditions, where they may partially supplant the present type of x-ray radiation.

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MOSES SCHOLTZ, M. D. (1930 Wilshire Boulevard, Los Angeles).—The report by Doctor Taussig is both timely and instructive. I fully appreciate and concur in his conservative judgment.

The introduction of grenz rays in therapeutics was looked forward to by dermatologists with great expectations. It was hoped for that a new border-line modality between ultra-violet light and x-rays was discovered and that it would combine to some degree the physical and clinical properties of both.

Had this proved to be true, a new promising vista of therapeutic possibilities would have been open to dermatologists. Unfortunately subsequent research by physicists and clinicians refuted this expectation by establishing that grenz rays are not a border line for rays, but merely a variety of x-ray of an extremely low voltage.

My personal experience with grenz rays is very limited as I have used the apparatus for clinical observation only during the last few months. I was able to try it out in about two dozens of various types of superficial dermatoses.

It is apparent that the field of clinical application of grenz rays in dermatology is bound to be very limited for a technical reason: the small size of the aperture of the Müller tube and the short distance used in the exposure allow the treatment of only very small patches.

The second and still more important drawback revealed in my experience, and observed by others, is persistent pigmentation lasting for many months. This obviously precludes the use of grenz rays on the face and other exposed parts, particularly in blond individuals with fair skin.

In my limited series I saw patches of chronic squamous eczema, psoriasis, senile keratoses, and incipient superficial epitheliomata clear up after one or two treatments. The dosage used was in accordance with the depth of the lesions, varying from one-half to full erythema dose.

It seems that the dosage of grenz rays is not standardized as yet either in regard to individual dermatoses or to individual Müller tubes. Thus, on my machine an exposure for one minute of the flexor surface of the forearm with eight milliamperes, eight kilovolts, and six centimeter skin distance produced a mild erythema, but an exposure for two minutes produced a distinct erythema. The exposure for three or four minutes, as recommended in the literature, produced in a few cases a sharp reaction with acute exudative dermatitis.

In spite of the somewhat disappointing character of the early reports, it seems to me that grenz rays will find their place in dermatologic therapeutics, at least, in a few types of carefully selected dermatoses. I believe that the maximum of clinical usefulness of grenz rays will be found in the range of medium and small fractional doses, which so far have not attracted sufficient attention on the part of the early observers.

Bearing in mind the fact that grenz rays are merely a variety of x-rays of extremely low voltage provides a sufficient safeguard for their clinical use in careful and qualified hands. Grenz rays call for further clinical observation and research to define the dosage and clinical indications, and are not ready at present for a broadcast in the general practice.

✽

DOCTOR TAUSSIG (Closing).—At the time the above paper was presented no instance had been reported of the occurrence of telangiectasia or atrophy following grenz ray therapy, the one exception being doubtful. At the Portland meeting of the American Medical Association, Eller showed photographs of telangiectasia which followed a moderate erythema dose and stated that he had seen a few of these late changes, bearing out the warnings of a number of the more conservative writers. These late effects are apparently less frequent than with x-rays of shorter wave length and perhaps less intense, but the danger is there and the statements of some of the enthusiasts concerning the safety of these rays must be disregarded.



## BRONCHOPNEUMONIA IN EARLY CHILDHOOD—ITS TREATMENT\*

By E. P. Cook, M. D.  
San Jose

DISCUSSION by Edward J. Lamb, M. D., Santa Barbara; William A. Beattie, M. D., Sacramento; Adelaide Brown, M. D., San Francisco.

THE knowledge which has been gained in recent years concerning the etiology and pathology of bronchopneumonia has not resulted in any striking increase in our ability to cope with this disease successfully. Possessing no specific remedy, the problem is at once a challenge to our therapeutic ingenuity and resourcefulness. Many different agents of undoubted worth are used, and it is my present purpose to attempt to assemble and coördinate these procedures, none of which are original, into a systematic plan of treatment. Such a plan places in the foreground the carefully considered management of the case as a whole, rather than focusing our attention too minutely on drug therapy. Pneumonia is simply another instance in which the child, as a whole, is sick, even though the major pathological processes are limited to the air passages and lungs.

### PATHOLOGY

The upper air passages, being inhabited by a great variety of microorganisms and extending directly into the lungs, make possible the development of bronchopneumonia under a variety of conditions. Infectious diseases are by far the most important group of predisposing causes. Measles, whooping-cough, and influenza are familiar examples. Simple infections of the respiratory tract, the so-called mixed respiratory infections, and bronchitis are also of the utmost importance. We may, in fact, have great difficulty in determining whether or not a bronchitis has advanced to a point where it should be called bronchopneumonia. Fortunately our treatment does not depend upon the answer to this question, but rather we must be guided by the degree of illness as evidenced by the toxemia, fever, and general prostration of the patient.

### SYMPTOMS

The clinical course of a primary infection is fairly definite. The abrupt onset with fever, prostration, and rapid pulse denotes an acute infection. The appearance of cough and dyspnea will direct our attention to the lungs, where the initial signs are faint or impure breath sounds over a localized area, followed in a day or two by râles. Bronchial breathing is heard only where large areas of consolidation occur. Physical findings will change from day to day as different bronchial areas become involved with exudate. The duration is indefinite, varying from a few days to several weeks or months.

In the secondary type of infection the problem is more difficult. A sudden rise in temperature and onset of cough during the course of an acute

infectious disease should never fail to direct one's attention to the lungs. X-ray examination of the chest will serve to confirm the diagnosis.

### PROPHYLAXIS

Like every other disease, bronchopneumonia is easier to treat by preventing its development; and since certain things can be accomplished along this line, it is well to bear them in mind. It is not controllable by ordinary public health methods of isolation, quarantine, and supervision of food and water supply. Without introducing an alarming note, it is quite in order to state frankly to parents of children having measles, whooping-cough, influenza, and the other acute infectious diseases that the mortality in these conditions is in large part due to the development of pneumonia, and therefore their utmost care and co-operation is urged in keeping the child in bed and preventing exposure. Persons with acute or chronic upper respiratory infections should at all times be kept away from the premature and congenitally weak infant, but where this is not possible, a gauze mask worn by the mother is effective.

One thing which is of the utmost importance, but which frequently is accomplished with difficulty, is putting children to bed when they have a fever and keeping them there until they are entirely well. Too often mothers will allow the pleas of the child to overrule their judgment or their discipline and a slight cold becomes a more serious matter by reason of exposure and fatigue. Furthermore, it is a common custom for parents to allow a child to get up as soon as the temperature becomes normal. The only safe rule to make is that an afebrile period of at least forty-eight hours should elapse after a respiratory infection before a child is allowed to be out of bed. Even then it should be a matter of one or two hours the first day, with a convalescent period of three days before he is allowed to go to school. A child has no judgment in conserving his strength, and the minute he is up he goes at top speed until exhausted.

Ether anesthesia should not be administered to a child suffering from even the mildest form of respiratory tract infection except in case of a grave emergency.

### NURSING CARE

The first requisite in successful management is a capable, quiet nurse or attendant who understands the value of sickroom serenity and efficiency. A patient in the hospital has this matter taken care of automatically and the physician is relieved of a great responsibility, but the majority of cases are treated at home and by a mother who is perhaps willing and coöperative but lacking in nursing sense. Some people have it naturally, but we must recognize the instances where special instructions are necessary and by all means give them. This means sitting down and spending time in fundamental nursing instructions, but before we can do that we, ourselves, must know what constitutes good nursing care.

*Temperature Readings.*—A mother should be taught to read a thermometer, take the pulse and respiration so that these important observations

\* From the Department of Pediatrics, Santa Clara County Hospital, San Jose.

\* Read before the Pediatrics Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



can be entered on a chart which we prepare for that purpose. A graphic chart is most valuable in following the course of a fever, and may show the first indication of an arising complication.

*Ventilation.*—Warmed fresh air is vital to the patient's well-being. Adequate ventilation may be secured through open windows, but during cold or stormy weather these should be in an adjoining room rather than the sickroom. This air should be warmed to a temperature between 65 and 68 degrees as actually recorded by a thermometer. In this connection I have observed a difference in temperature of six degrees between the height of a standard crib and the height to which it was raised by putting twenty-inch blocks under the legs. Hence the necessity of placing the thermometer near the child. Such a temperature permits the child to be clothed lightly. It is exhausting even to watch a hot, restless child struggle under many layers of clothing and bed-covers, with the necessity of lifting the added weight with every inspiration.

In addition to warming, the air may also be moistened to an advantage. Plain unmedicated steam is very effective, or compound tincture of benzoin, oil of eucalyptus, or turpentine may be added to the water. Inhalations may be given for thirty minutes at intervals of every two or three hours and preferably under a canopy. It is not advisable to use a closed tent because of the extreme heat which develops, with resulting perspiration and possible chill afterward.

*Medicated Air.*—The safest apparatus is an electric vaporizer, or an electric plate on which is placed an open vessel. The croup kettle with an open flame is more commonly employed at home, but certain precautions must always attend its use. First it should not be placed so close to the crib that the child can reach out and get a steam burn, or tip it over and start a fire. The kettle should never be allowed to boil dry if benzoin is used in the water because such fumes are most irritating. All of these mishaps have occurred in my experience at one time or another, but constant warnings have reduced their frequency.

Inhalations should be continued as long as there is a distressing cough or scanty secretion. The milder cases may be sufficiently relieved by simply allowing a kettle to boil constantly in the sickroom.

*Diet.*—It is quite possible to give specific instructions to the nurse regarding diet, but these will necessarily vary with the individual child. Bearing in mind the possible protracted course of the disease, it is necessary to encourage the intake of as much nourishment as the digestive apparatus can tolerate. This is where an understanding nurse can be of great assistance. The various foods should be bland and easily digestible. These would include milk, broths, soft eggs, pureed vegetables, or creamed vegetable soups, scraped beef, jelly, junket, custard, and fruit juices. Milk is sometimes vomited, but this may be avoided by giving it hot and with the addition of bicarbonate of soda. In general, it is better to offer small

amounts of food at more frequent intervals than three large meals a day.

*Care of the Bowels.*—A daily bowel movement is to be desired, but it is the exception to have this occur spontaneously. If the movements are soft there is no objection to irregularity, but if constipation occurs the use of mild laxatives is indicated. Milk of magnesia, cascara, and phenolphthalein are usually effective, aided when necessary by an enema to empty the lower bowel. The problem should always be handled so as to disturb the patient as little as possible.

*Counterirritants.*—The use of some form of counterirritation is beneficial when pleural pains and cough are prominent symptoms. Mustard plasters are perhaps most effective. Variations in the strength of mustard and the sensitiveness of the skin make it impossible to give definite instructions regarding the proportions until a trial has been made. Strengths varying from one of mustard to six of flour to as strong as equal parts may be used. This is mixed with cold water, spread thinly on a cloth, warmed, and applied to back, sides, and chest for a period ranging from ten to thirty minutes. This may be repeated as often as every four hours.

Counterirritation is otherwise accomplished by applying flannel cloths wrung out of hot water and mustard, or with turpentine stupes.

*Hydrotherapy.*—A maxim which I have always thought particularly apt is "plenty of water inside and out." A child will voluntarily take a certain amount, but rarely is it sufficient to meet the demands of his toxemia. Further intake may be encouraged by offering orangeade, lemonade, any of the canned fruit juices or bottled soda water, given as such or diluted with water.

Sponging should be carried out daily at least once. A sponge bath at a temperature of 90 degrees, given under the covers so that the child will not be exposed to the air, often results in a refreshing sleep of several hours. Hyperpyrexia in itself may do little harm unless accompanied by nervous manifestations. An ice-bag to the head and a tepid sponge can transform a delirious patient into one enjoying a quiet sleep.

Just a word regarding sponging: Most mothers fear the procedure as one which may cause the child to take more cold. This should not result if the patient is not exposed and the bath is begun at a temperature of 95 degrees, gradually being reduced to 90 degrees and even 85 degrees, according to the degree of fever. To be most effective the cloth should be wrung fairly dry, the bath continued for ten to fifteen minutes, and the moisture allowed to evaporate on the skin.

*Abdominal Distention.*—This unpleasant occurrence is quite frequent. When it first appears, all food should be withheld for twelve hours and a cathartic given.

Turpentine stupes, and enemas of soda, turpentine, or milk and molasses will relieve the milder cases. If these are ineffective, one-half cubic centimeter of obstetrical pituitrin should be given every three hours, or as needed.

A persistence of the condition after these measures have failed—and they unfortunately will fail



sometimes—usually means the development of peritonitis or approaching death as a result of circulatory failure.

#### DRUG TREATMENT

The parents' importunate demands that something be done in a critical case often leads us into the error of prescribing medication which serves no useful purpose in our scheme of treatment, but does irritate and exhaust the child in the effort to administer it. Furthermore, it is apt to turn him against taking nourishment by mouth and make it difficult to give that which is most needed.

These parental demands may be met by emphasizing the importance of rest, less disturbance, and the hour by hour nursing care. I believe we are well repaid for such time spent in education. A case in point was a mother who stated to me recently that she had succeeded with minor colds of the past winter by the common-sense care which she had given her children, as learned by experience with pneumonia the preceding year, and drugs played very little part in this case.

*Cough.*—Children with pneumonia always cough and this symptom does demand our consideration. The warmed fresh air, inhalations, and counter-irritation are the first things. Hot drinks are very soothing. One ounce of hot milk with a little baking soda, given frequently, will often allay a distressing spasm of coughing. In the early stage, when secretions are scanty, syrup of hydriodic acid is effective. To this may be added chloroform water, sodium bromid or codein as a sedative and the whole made palatable by flavoring with syrup of raspberry. Codein is a drug which can be given with sure sedative effect and no danger of habit formation. I have never heard of a codein addict.

*Rest and Sleep.*—Rest and sleep are very necessary in the conservation of strength, but hyperpyrexia may result in a distressing degree of restlessness or insomnia. At such a time it is desirable to insure sleep and the use of sodium bromid, veronal, or other soporific is definitely indicated.

*Cyanosis.*—Cyanosis may appear as a result of improper ventilation, extensive involvement of the lung tissue or plugging of the bronchi with secretions. The inhalation of oxygen has been of decided benefit, although this is an open question with many clinicians who feel it to be inefficient.

*Circulatory Failure.*—Circulatory failure has always been one of the most feared symptoms in pneumonia. As a matter of fact clinical study has shown that as an isolated event it occurs very seldom. Rather it is associated with a terminal collapse in which there is respiratory failure, abdominal distention, acute sepsis, and rapid death. Heart stimulants, such as strophanthin, caffeine, atropin, or adrenalin, are to be given. Routine digitalization has given rise to a great deal of discussion and may be a harmless procedure if not carried too far. It has not been my practice to give it as a matter of routine.

*Respiratory Failure.*—Respiratory failure as evidenced by dyspnea, cyanosis, and restlessness are more amenable to stimulation. Nothing is more effective than the mustard pack. It is

quickly and readily prepared from materials which are instantly available. Further than this, atropin, oxygen inhalations, and whisky or brandy may be used.

*Specific Therapy.*—If bacteriological study has shown the patient to have a Type I pneumococcus infection, specific serum therapy should not be forgotten.

#### BLOOD TRANSFUSION

I have recently been interested in the effect of blood transfusion in cases of prolonged acute infections and have transfused six infants who were ill with bronchopneumonia.

One was a protracted case which had been through a stormy two weeks and was showing definite improvement when the other lung became involved. About 150 cubic centimeters of whole blood was given, and although the child did not completely recover for another three weeks it was the impression of both myself and the parents that the child's vitality was definitely greater after the transfusion. A complicating factor was a double suppurative otitis media.

The second case was one which was sent into the hospital with a complicating empyema. A rib resection was done, and 125 cubic centimeters of whole blood given; the patient died twenty-four hours later.

The other four cases were infants who had been sick from four to eight days with profound toxemia and prostration. Amounts of blood varying from 86 to 125 cubic centimeters were given, and each one showed a prompt decline in the temperature and improvement in the general condition. They were convalescing within a week. The oldest of these six babies was sixteen months. In each case the blood was given into the longitudinal sinus.

#### COMPLICATIONS

*Dehydration.*—Some of the sickest children I have seen have been those who were allowed to develop a marked degree of dehydration. I have already mentioned the necessity of forcing fluids by mouth. If a satisfactory amount, which means from one to two quarts a day, cannot be given in this manner, we must resort to infusions or intraperitoneal injections. Large amounts of normal salt solution can be given by hypodermoclysis. Glucose solution may also be given in this manner although there are reports of cases in which sloughing occurred after such injections. In the peritoneal cavity, Ringer's solution is preferable. From 200 to 500 cubic centimeters may be given every eight to twelve or twenty-four hours with complete absorption and without irritation. This latter advantage makes it superior to normal saline or glucose. The giving of fluids by rectum is very unsatisfactory. A few ounces may be retained at first, but repetition of the procedure results in such irritation of the rectum that further retention is impossible. The intraperitoneal route is the one of choice because it is less painful and can be repeated frequently. At the same time absorption is not so rapid as to thrust a burden on the cardiovascular system.

*Otitis Media.*—Infection of the middle ear is always possible when there is an infection in the upper air passages; in pneumonia it is one of



the most frequent complications. The infection may be through the blood stream or through the eustachian tube, the latter favored by the ever present cough. The only certain way to detect the condition early is by frequent examinations of the ear-drums. Otitis media may, and frequently does, occur without causing pain. The ears are objects of suspicion also when there is a sudden rise in temperature, increasing restlessness, rolling of the head from side to side, or the definite complaint of earache.

Pain alone is relieved by the application of dry heat or moist compresses. Carbolyzed glycerin is a favorite remedy and causes a local anesthesia of the drum membrane which is useful if a paracentesis becomes necessary.

The best procedure is to irrigate with hot boric acid solution. One teaspoon of boric acid crystals is dissolved in a pint of water, heated to a temperature of 100 degrees Fahrenheit, and placed in an irrigating can which is held above the ear about one foot. This avoids excessive pressure against the drum. A pointed glass tip is used on the end of the tubing and each ear canal douched with the entire amount. This is repeated every three hours and serves not only to allay the pain, but also to relieve the inflammation. Once the mother understands the procedure, it is easier than the rubber syringe method, and more effective because of the constant gentle flow.

An ear-drum which shows increasing redness and swelling should be incised early. If carefully performed it will not result in introducing any outside infection and does allow the escape of gas and serum. Prompt healing and relief of the symptoms will usually follow.

If distinct bulging of the drum membrane has occurred, the paracentesis will be followed by drainage of pus for from a few days to three weeks and sometimes even much longer. During this period, douching should be carried out carefully and continually, and the external ear kept scrupulously clean to avoid the development of furunculosis.

*Pyelitis.*—Urinary tract infections will frequently follow a focus in the respiratory passages, and while pyelitis is not a common sequel of bronchopneumonia, examinations of the urine must be made as the only means by which its presence can be detected. A moderate albuminuria is to be expected, but persisting pyuria demands the recognition and treatment of pyelitis.

*Empyema.*—Empyema is a serious, though not very frequent complication of bronchopneumonia. In the daily examination of the chest the presence of fluid may be detected. An exploratory thoracentesis will confirm the diagnosis. If the effusion is clear, simple drainage may relieve the condition without recourse to surgical drainage. Purulent fluid demands rib resection and adequate drainage. Confidence must be placed in a competent surgeon to decide the correct procedure in the individual case.

*Meningitis and Meningismus.*—Symptoms of meningeal irritation demand early spinal puncture for two reasons. First, it is the only way by which we can differentiate meningitis from

meningismus; and, second, it is good treatment in either case. Repeated spinal drainage offers the best hope of relief in meningitis, and will alleviate the marked nervous symptoms of meningismus.

#### CONVALESCENCE

All children with bronchopneumonia should be kept in bed at least one week with a normal temperature. This time should be extended for the severe cases and those with persisting cough, but in any case the child should feel perfectly well before he is allowed to get up. Recurrences would thus be avoided and ultimate complete recovery hastened. Exercise at first should be very limited and the patient's initial period out of bed should be no longer than fifteen to thirty minutes. This is gradually increased each day, as returning strength permits. In allowing the patient to be out of doors, it must be remembered that the child has become accustomed to the atmosphere of the house and these fresh-air periods must be carefully guarded and of short duration.

The diet need not be limited and the appetite is usually such that it is not necessary to force food. Cod-liver oil is one of the best reconstructive tonics; syrup of ferrous iodid or saccharated carbonate of iron may be added if the infection has been prolonged to the point of producing a secondary anemia.

#### SUMMARY

The treatment as outlined is based upon clinical observation and experience with cases in the writer's practice. It necessitates highly intelligent care: care which safeguards against serious complications by treatment of simple respiratory infections, which recognizes all possible complications, and which is painstaking and tireless in surrounding the patient with all possible hygienic protection. The fundamental principles are proper rest, fresh air, proper food, hydrotherapy, and symptomatic medication.

215 Sainte Claire Building.

#### DISCUSSION

EDWARD J. LAMB, M. D. (1515 State Street, Santa Barbara).—Doctor Cook's paper brings before those present at this Pediatric Section a conservative, concise and effective means of treating bronchopneumonia.

I consider the nursing care of these patients of the utmost importance. Quietness, rest, fresh air, and proper nourishment are the chief essentials.

I am glad to hear Doctor Cook emphasize the importance of fresh air being warmed to a temperature of 60 to 65 degrees. So many mothers and nurses feel that fresh air becomes stale when warmed to this temperature, and consequently our little patients suffer a relapse or reinfection when a portion of the exposed body becomes chilled by this cold air.

Concerning medication, great relief of dyspnea may be afforded by inhalation. Drugs given internally may be limited to atropin, iodine, opium (alkaloids), and ammonium salts. ❀

WILLIAM A. BEATTIE, M. D. (Medico-Dental Building, Sacramento).—Bronchopneumonia is in most instances not difficult to diagnose, but in almost every case we are confronted with obstacles and difficulties in its treatment. There is no specific to use in bronchopneumonia, and for that reason, if for no other, we welcome the privilege of listening to this unusually well-developed system of its general treatment as presented by Doctor Cook.

We know that bronchopneumonia is largely a preventable disease, and too much emphasis cannot be placed on this phase of its treatment. In this disease



most certainly "an ounce of prevention is worth a pound of cure." Advice given to parents as to the proper method of treating common "colds," or even better, methods of preventing the spread of this common infection, will help in no small measure to prevent the development of bronchopneumonia. In the vast majority of children who contract this disease, we find them either subnormal in nutrition or neglected in the care given them during the course of a simple infection of the upper respiratory tract. The consequences are the development of the dangerous disease, bronchopneumonia. The fact of lowered resistance may be the primary condition which has made them a victim to infection. In other words, bronchopneumonia is usually a disease secondary to a mild respiratory infection which is found in the majority of instances, in children whose care or development has been faulty. It is therefore of particular importance that in any outline of the treatment of bronchopneumonia, special emphasis be laid upon prophylactic measures.

ADELAIDE BROWN, M. D. (909 Hyde Street, San Francisco).—Doctor Cook's paper emphasizes the importance of nursing in bronchopneumonia. Every mother should be able to take temperature, record bowel movements, diet (amount taken), and count pulse and respiration in the sleeping child, and keep a log of the day's happenings. *Written* instructions should be left, whether the mother or a nurse carries out the orders. In the one case they are an encouragement and save uncertainty; in the other, they save discussion between the mother and nurse.

In using a croup kettle or a steaming apparatus, I have it set in a metal basin as a precaution against fire. For the restless baby, or young child with high temperature, packs changed every two or three hours are less irritating than sponging and avoid narcotics and reduce temperatures.

For enemata to reduce gas, milk of asafetida with equal parts of water or molasses and milk do not irritate as more powerful purgatives do.

Conservation of strength is the sheet anchor of success in these cases.

## SURGICAL AND NONSURGICAL FACIAL NEURALGIAS\*

By MARK ALBERT GLASER, M. D.  
Los Angeles

DISCUSSION by Samuel D. Ingham, M. D., Los Angeles; H. Douglas Eaton, M. D., Los Angeles; Walter F. Schaller, M. D., San Francisco.

USUALLY when neuralgia of the face is considered, attention is directed to the trigeminal tract. This neuralgia is an extremely important disease entity, but the many painful affections involving the face and referable to other cranial nerves should not be disregarded.

### TRIGEMINAL NEURALGIA

Trigeminal neuralgia was recognized by Avicenna in A. D. 1000, and was later described by Schlichtung (1748), Nicolous André (1756), who first named it "tic douloureux," and Fothergill (1773), who accurately described the disease. Very little can be added to the original description of acute attacks of sharp, lancinating pains, usually with freedom from pain between attacks, but in some cases, a sense of soreness persists in the painful zone. The attacks of pain are brought

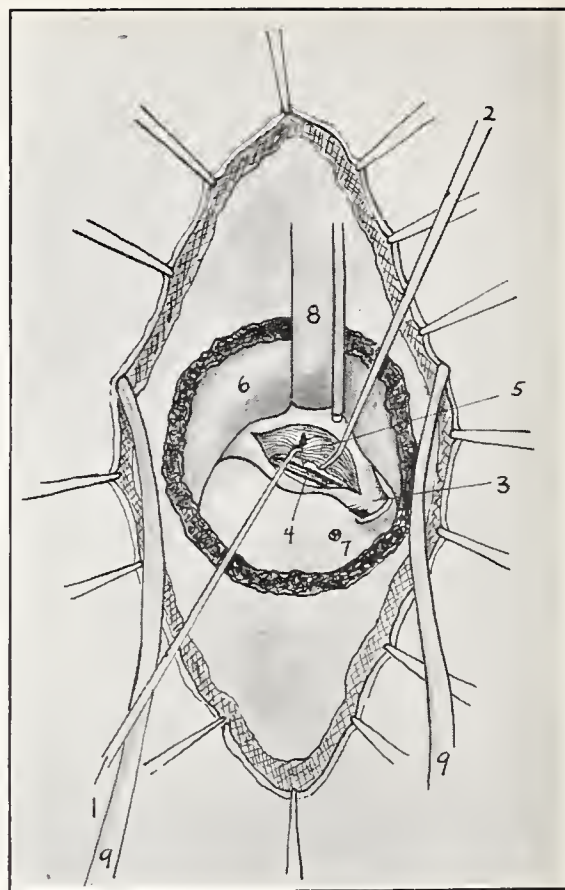


Fig. 1.—A semi-diagrammatic sketch demonstrating subtotal section of the sensory root of the trigeminal nerve. 1. Hook cutting the second and third division fibers. The fibers supplying the first division are intact. 2. Hook pulling the sensory root upward so as to expose the motor root. 3. Third division of the trigeminal nerve. 4. Motor root. 5. Ganglion. 6. Dura. 7. Middle meningeal artery. 8. Illuminated retractor elevating the brain. 9. Self-retaining retractor.

on by contact, and in the more severe cases by even a breath of air or spontaneously. The severity of the pain varies greatly, and in most cases the individuals may carry on their daily routine; it is only in rare cases that they become confined to bed fearing the extreme consequences of the attacks. The pain is superficial and is in the zone of the trigeminal nerve. Trigger zones are present (Patrick), and there are never any areas of anesthesia.

Trigeminal neuralgia is a disease of unknown etiology, spontaneous in origin, continuing uninterrupted through the patient's life, unless arrested by surgical procedure. No single instance of spontaneous cessation has been recorded. The treatment of trigeminal neuralgia is either alcohol injection of the nerve trunks, or surgery. Recently trichlorethylene has been introduced and the results have been satisfactory in some cases, though only temporary.

The surgery of the trigeminal tract is one of many interesting advances. Rose in 1892 resected the ramus of the mandible and curetted away the gasserian ganglion. Hartley and Krause published their contributions a month apart which consisted of the intracranial section of the peripheral branches of the gasserian ganglion through a middle fossa approach. The next great step was made by Spiller and Frazier when they divided the sensory root (1901). In 1915 Frazier advised a subtotal resection so as to prevent a

\* Read before the Neuropsychiatry Section of the California Medical Association at the fifty-eighth annual session, at Coronado, May 6-9, 1929.



keratitis (Fig 1). In 1919 Frazier again contributed the preservation of the motor root. More recently Dandy has advised the section of the sensory root at the pons, claiming many advantages for this new procedure over the previous operations.

The low mortality, which, in the hands of Frazier has been 0.37 per cent, the relief of pain and the prevention of keratitis does not as yet warrant a change from this well established technique. As most of the trigeminal neuralgias do not involve the ophthalmic division, the preservation of the upper third of the sensory root so as to maintain the sensory supply to the cornea is one of the most important contributions.

#### TUMORS OF THE GASSERIAN GANGLION

Tumors of the gasserian ganglion have been reported by Russell, Frazier, Peet, Sachs, Shelden, etc. Many of these tumors arise from the dural sheath of the ganglion; others are nasal pharyngeal tumors; while still others are metastatic. Tumors may readily be diagnosed when a patient presents a clinical picture of pain in the trigeminal region plus anesthesia with paralysis of the muscles of mastication, or associated with other cranial nerve involvement.

#### ATYPICAL NEURALGIA

From the group of trigeminal neuralgias have been separated a series of patients complaining of pain in the face, which was not relieved by section of the sensory root, or by any other procedures which relieved the pain of trigeminal neuralgia. For want of a better term this group has been designated as "atypical." A study of a series consisting of one hundred and forty-three patients (Glaser) demonstrated that whatever type of therapy was undertaken, the pain usually became worse. Among the procedures attempted for the relief of pain were: injection of alcohol in branches of the trigeminal nerve; cocaineization and injection of the sphenopalatine ganglion; extraction of teeth; drainage of sinuses; supra-orbital and infra-orbital nerve avulsions; nasal operations; cervical sympathectomy (Frazier); stripping of the peri-arterial (carotid) plexus (Frazier); subtotal section of sensory root of trigeminal nerve; mastoid operations and pelvic operations. This disease is more frequent in females; both sides of the face are equally involved, and is more common in the first, second and third decades. Some patients present a complete arc of pain, as in Figure 2, which extends from the lower jaw to the upper jaw, malar region, nose, over the eye, in the eye, under the eye, frontal area, temporal area, parietal area, behind ear, front of ear, through ear, to occipital region, suboccipital region, neck, shoulder, or arm. In the series of cases reviewed, ten areas of pain distribution were determined, all falling within the zone herein considered. Various combinations of these areas were present, as was also pain in single zones.

Analysis of the type of pain of which these patients complained demonstrated an extraordinary number of descriptive adjectives. A single

adjective was not always used; frequently there were several, and in some cases the patient was wholly at a loss to describe the pain. There is one outstanding characteristic, however, in which all concurred—the pain was not superficial; it was not referred to the surface like that of trigeminal neuralgia; it was deep-seated in the tissues, in the bone, or in the eyeball. One is in the habit of recognizing various types of sensation as thermal, pain, tactile and pressure. Those of *tic douloureux* invariably imply thermal sensation and a sense of sharp, cutting or stabbing pain; those of atypical neuralgia seem frequently to imply pressure sensations, as, throbbing, gripping, pulling, bursting, and the like. The pain of *tic douloureux* is essentially paroxysmal with intervals of complete relief. The pain of atypical neuralgia is essentially persistent and continuous, with periods of days in which there are severe exacerbations. During the first two or three hours of these aggravated periods the pain gradually increases until the height is reached, after which the intensity slowly subsides, until at the end of the third day or so the chronic phase is resumed.

There are many variations from this rather typical history. There may be an interim of from three to nine months. A few cases showed a remission as long as from two to three years. During these remissions and these interims some patients were entirely free from pain while others had a continuous feeling of oppression or aching in the region of the pain zone, though not of such severity and intensity as during the exacerbation.

None of the patients included in this survey was relieved by any therapeutic measures. In a few the pain was eased by the administration of coal-tar products, or the common alkaloids such as codein and morphin. Mention may be made in passing of the common use of opiates in the atypical neuralgia, while those of true *tic douloureux* flatly refuse opium or its derivatives.

The factors aggravating pain may be divided into general—such as changes of temperature, changes of climate, and menses. These factors were much more frequent than the local conditions, such as washing the face, brushing the teeth, or eating, the latter being much more frequent in trigeminal neuralgia.

In conjunction with the expression of pain, many patients had associated sympathetic phenomena, such as lacrimation, edema of the eyes, unequal pupils, corneal injection, exophthalmos, salivation, nasal discharge, flushing of face, aural discharge, nausea and vomiting, perspiration.

#### SPHENOPALATINE NEURALGIA

Sluder, after a careful study of the anatomical relations of the sphenoid and posterior ethmoids, demonstrated that in many cases these cells were in close proximity to the nasal ganglion. He assumed that if inflammation of the optic nerve could occur from infection of these sinuses there

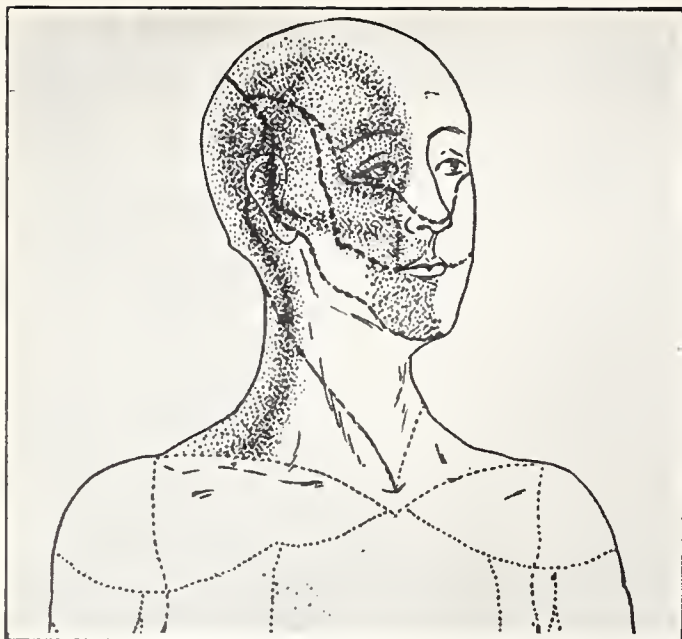


Fig. 2.—Atypical neuralgia. The dots indicate the complete pain distribution. The dashes indicate the sensory distribution of the trigeminal nerve. Note how the pain of atypical neuralgia crosses the sensory distribution of the trigeminal tract.

was no reason why the nasal ganglion would not suffer.

A history of coryza was followed by pain in the root of the nose, in and about the eye, the upper jaw and teeth, occasionally the lower jaw and teeth. This pain also extended backward to the temple and above the zygoma to the ear, and was always severest at a point five centimeters back of the mastoid. It could also extend to the occiput, neck and shoulders, or even the arm, forearm, hand and fingers. Associated with this pain was a "stiff" or "aching" throat, or itching of the hard palate. In addition, there were sympathetic symptoms which could also occur without even pain. The patient was seized with severe sneezing and a thin, hot, profuse secretion occurred; the eyes were reddened; there was increased lacrimation; the pupils were dilated and there was dyspnea, dry râles, asthenia, and photophobia. If these cases do not get better by cocainization, he believed the pain was caused by a more central lesion of the maxillary and vidian nerve, secondary to sphenoidal inflammation. Intrasphenoidal application of cocain was then indicated. Injection of the ganglion, or applications of formaldehyd and silver was indicated in the more severe cases. If the patient is not relieved by these treatments the sphenoid should be operated upon, because the nerve and ganglion would then be imbedded in a chronic, inflammatory tissue. Many of these cases have only a transitory relief. These cases could not be explained clinically, and future study would necessarily have to solve the problem.

#### NEURALGIA OF THE SEVENTH CRANIAL NERVE

The ear sensory supply is extremely complicated and there are many areas of overlap. The sensory supply of the ear has been attributed to the seventh, ninth, and tenth nerves. Anteriorly the ear is bounded by the trigeminal tract, posteriorly by the cervical nerves. Ramsay Hunt

was the first to call attention to the sensory root of the seventh nerve and its sensory supply to the ear. A study of herpetic inflammations of the geniculate ganglion demonstrated that this ganglion supplied the tympanic membrane, the external auditory canal, the medius, the concha, tragus, antitragus, lobe of the ear, antihelix and fossa of the antihelix. Taylor and Clark reported a case of seventh nerve otalgia wherein the patient experienced paroxysmal pain in front of the left ear. The pain occurred for a half-hour almost weekly. It was stabbing, not only in front, but also deep in the ear. The seventh nerve, the nerve of Wrisburg, and part of the eighth nerve were divided. Operation resulted in relief of pain, complete facial palsy and deafness on the same side for four days. After six months the facial palsy improved; the patient was entirely pain free.

#### NEURALGIA OF THE EIGHTH CRANIAL NERVE

Frazier in 1914 sectioned the eighth nerve of a patient with Meniere's disease without results. Recently, Dandy has operated on a series of cases with the symptoms of Meniere's disease, that is, nausea and vomiting, with tinnitus in a deaf ear. Absolute cures resulted.

#### NEURALGIA OF THE NINTH CRANIAL NERVE

Weisenburg was the first to call attention to pain in the throat due to involvement of the glossopharyngeal nerve in a brain tumor (1910). In 1920 Sicard and Robineau reported three cases of glossopharyngeal neuralgia. Harris described two cases in 1921. Doyle in 1923 reported four more cases. Since then some twenty-five cases have been reported. Glossopharyngeal neuralgia consists of sharp, shooting pains in the region of the tonsil, base of the tongue, referred to the ear, and occasionally down the neck. There is a trigger zone in the tonsillar region and the base of the tongue. The attacks may also be brought on by swallowing and eating or may occur spontaneously. The operation is intracranial section and has been accomplished by Adson, Stookey, Dandy, with the entire relief of pain.

#### NEURALGIA OF THE TENTH CRANIAL NERVE

In deep-seated pain in the ear and throat, due to carcinoma, Fay gained relief by section of the



Fig. 3.—X-ray of tooth showing pulp stone in center.



tenth nerve when the ninth nerve, which had previously been sectioned, did not relieve pain. Pain of tuberculous laryngitis is referred to the superior laryngeal nerve of the vagus and can be relieved by injection of alcohol, or by section.

#### NEURALGIAS DUE TO MALIGNANT INVASION OF THE VARIOUS CRANIAL NERVES

Malignant disease about the face and neck with the terrific pains that result therefrom, and the extreme discomfort associated with sloughing surfaces, make the patient extremely miserable. The cauterization and x-ray treatment that is carried out causes an extreme degree of pain. It is in these cases that injection with alcohol, or section of the various nerve roots, will greatly ameliorate pain and lessen the patient's suffering, and will,

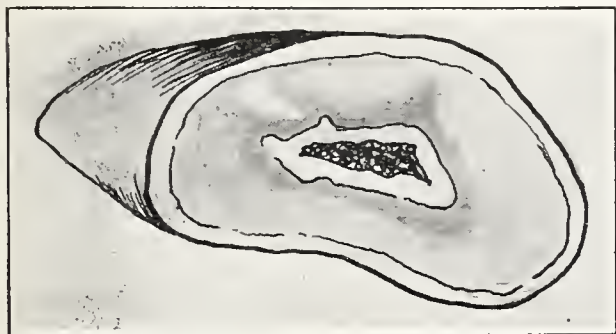


Fig. 4.—Cross section of the same tooth, showing presence of pulp stone in the center. (Tooth extracted by Dr. J. M. Silverman.)

in addition, allow the surgical and plastic procedures to be carried out painlessly. Pain deep in the ear is a symptom difficult to relieve, and it is for this reason that section of the glossopharyngeal, or the tenth nerve, may be indicated. Upon rendering these patients pain free, the morale is greatly increased, morphin is unnecessary, and even though these patients realize the procedure has nothing to do with a cure of their primary disease they are extremely grateful for the relief of this continuous, terrific, unbearable pain.

#### DENTAL PULP STONE NEURALGIA

Severe attacks of lancinating pain, referable to one tooth or several teeth, is a disease seen more often by the dentist. It is caused in many cases by pulp stones which are calcareous nodules imbedded in the pulp and which press upon the nerves. X-ray will demonstrate these nodules. Extraction of the tooth abolishes the pain (Figs. 3 and 4).

#### CONCLUSIONS

It is just as important to recognize the atypical form so as to desist from hopeless surgery as to recognize those surgical neuralgias which can be cured 100 per cent by operative means. Furthermore, those patients who suffer from neuralgias, due to invasion or irritation of the cranial nerves by malignant growth, should be afforded relief of pain either by alcohol injections or surgical measures.

In this paper I have only attempted to briefly consider the more salient and outstanding diagnostic features of the facial neuralgias.

727 West Seventh Street.

#### DISCUSSION

SAMUEL D. INGHAM, M. D. (1252 Roosevelt Building, Los Angeles).—The survey of the subject of neuralgias, as presented by Doctor Glaser, leaves little to be said except by the emphasis or discussion of details. The typical picture of tic douloureux is easily recognized and the most effective treatment is, of course, resection of the sensory root. The method which Doctor Dandy has been using recently, as mentioned by Doctor Glaser, is an approach by way of the posterior fossa under the cerebellum. It is interesting to note that Doctor Dandy states that he has been able to differentiate the pain from the tactile fibers in the sensory root of the fifth nerve at the point where they enter the pons. By cutting only the pain fibers, tactile sensation is preserved in the face and trophic ulcers of the cornea do not occur.

The injection of the different branches of the peripheral nerve with alcohol has a definite place in the treatment, especially with those patients who are poor surgical risks.

Medical treatment is generally unsatisfactory, although marked relief sometimes occurs from daily doses of castor oil over a prolonged period.

The atypical neuralgias consist of a heterogeneous collection, and tax the diagnostic ability of the physician.

It is of interest to note that important contributions to the knowledge of anatomy and physiology of the sensory cranial nerves have been made by the neurosurgeons.

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H. DOUGLAS EATON, M. D. (1136 West Sixth Street, Los Angeles).—Doctor Glaser, in his discussion of surgical and nonsurgical neuralgias, has brought to our attention a most important subject. Though these cases are not so frequent as some other less painful neurological conditions, when encountered they are most intractable to treatment.

Occasionally one sees a case of trigeminal neuralgia yield at least for a time to the removal of foci of infection or toxemia but, on the whole, one is quite ready to agree with Doctor Glaser that the treatment of this disease is operative either by alcohol injection or actual surgery. Successful surgery certainly works a miracle for these patients.

Frequently cases are encountered which must be classed in Doctor Glaser's atypical grouping. Such cases are not amenable to surgical or medical treatment and illustrate again the present limitations of therapeutics in organic neurology.

The objective in all the facial neuralgias we are called upon to treat should be accurate diagnosis, for on such a study is dependent any possibility of successful therapy. In facial malignancy, nerve surgery is often of tremendous value in relieving the extreme suffering.

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WALTER F. SCHALLER, M. D. (909 Hyde Street, San Francisco).—Neuralgia has many points in common with causalgia in the character of the pain, superficial stimuli causing attacks, and radiation of pain. For this reason and because of the preservation of sensation, contrasted with its loss in neuritis, I believe that the pathology will eventually be discovered in the sympathetic nervous system. Doctor Glaser points out associated sympathetic phenomena in his article. Pain in the domain of the trigeminus, affecting more than one branch, will at times be relieved by the injection of the one in which pain originates or shows a well marked trigger point.

In neuralgia of the ophthalmic division, Vincent of Paris has achieved a result by decortication of the

temporal artery when other surgical means had failed. Sluder has pointed to the sphenopalatine ganglion as a seat of atypical neuralgia, and Sewall of Stanford has devised a new surgical approach to this ganglion.

The treatment of severe neuralgias is tending toward surgery; many patients who have had temporary relief from medical measures or injections finally request permanent relief by neurotomies. The removal of focal infections in established cases has been far from satisfactory in my experience: a patient with a facial neuralgia of years' standing became edentulous soon after the onset. The diagnosis of reflex neuralgia, due to tooth impaction, is not made so frequently as in the past.

Doctor Glaser has given us a concise and comprehensive account of the present status of neuralgia. The profession should be on the lookout for atypical neuralgias, and avail themselves of the suggestions for treatment.

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DOCTOR GLASER (Closing).—I wish to thank Doctors Schaller, Eaton, and Ingham for their very interesting and instructive discussions.

## TUBERCULOSIS IN SCHOOL CHILDREN\*

### SOME DIAGNOSTIC POINTS

By E. W. HAYES, M. D.  
Monrovia

DISCUSSION by William M. Happ, M. D., Los Angeles;  
Lloyd B. Dickey, M. D., San Francisco.

A CLEAR conception of the pathogenesis, the physical signs, and clinical symptoms of pulmonary tuberculosis in children has, I think, been the most perplexing problem that those of us who are dealing with tuberculosis have had to handle. An understanding of these factors, however, is of vital importance in our campaign against tuberculosis, for, as has been repeatedly demonstrated, if the disease is discovered in its early stage and the child properly handled, it can, for the most part, be overcome. On the other hand, if the disease is allowed to progress beyond the early stage, during both the period of childhood and that of adolescence, the mortality rate is high. Again, children who receive a severe infection and who do not succumb in early life, and who do not receive special care to enable them to overcome the infection, constitute from 70 to 80 per cent or more of our adult cases of tuberculosis. Dr. Walter Rathbun recently stated that he believes that we will find the missing link in the tuberculosis problem through the study of the child.

### EARLIER IDEAS OF PATHOGENESIS

As to the pathogenesis, in 1876 Parrot stated that the primary focus of infection in children is in the parenchyma of the lung. In 1912 Ghon, in reporting numerous autopsies, confirmed Parrot's opinion. Following Parrot's and Ghon's work we were left with the impression that the tracheobronchial glands become involved by extension through the lymphatics from the primary focus in the parenchyma of the lung; that this primary focus, for the most part, heals; that sub-

sequent involvement of the lung proper is the result of a reëxtension of the disease from the tracheobronchial glands.

Some five or six years ago the national association appointed a committee of six men to formulate an outline or standard which would serve as a guide in our study and classification of tuberculosis in children. In their report this committee simply added to the classification which we have for adults, that of hilum tuberculosis. Hilum tuberculosis, as described, was a separate condition occurring as the characteristic disease of childhood, wherein the glands and the tissues around the root of the lungs were the seat of the disease. Here again the inference was that subsequent involvement of the parenchyma of the lung is, for the most part, a direct extension from this area.

### MORE RECENT REPORTS

Since this report was submitted, a number of men, both clinicians and radiologists, have continued to carry on an intensive study of the child. This group includes such of the present workers as Rathbun, Myers and his associates, Dunham, Opie, McPhedran, Chadwick, and several others. The opinion of at least some of these men differs from that set forth by this committee, not only as to the pathogenesis, but also in the interpretations of physical and x-ray signs and clinical symptoms. The work of these later investigators has been so convincing that, at the present time, at least some of the original committee concur with them in their opinions. The result is that the National Sanatorium Association has now appointed a supplementary committee to help work out a further basis for the standardization and classification of pulmonary tuberculosis in children.

### REVIEW OF THE FINDINGS OF OPIE AND MCPHEDRAN

The work of Opie and McPhedran, who for the past seven years have been carrying on this research work in connection with the University of Pennsylvania, has been particularly enlightening. Their work has been so thorough and their conclusions so important that I feel justified in taking a few minutes to review their findings before this gathering. During this seven years they have studied not only a large number of children, but they have also studied, by x-ray and tissue examination, four hundred pairs of children's lungs after they have been excised at post-mortem. According to their findings, subsequent involvement of the lung is an extension from the primary focus and not from the tracheobronchial glands. They grant that the extension of the disease from the hilum region into the lung parenchyma may occur when the glands break down and rupture into the capsule. Such incidence of spread, however, is so rare as to be almost a curiosity.

These men still regard tracheobronchial lesions, or the so-called juvenile tuberculosis, as important because they indicate severe infection, and the children in whom they occur are likely to develop diffuse pulmonary lesions from the primary

\* Read before the General Medicine Section of the California Medical Association at the Fifty-Eighth Annual Session, at Coronado, May 6-9, 1929.



focus, but not as a direct extension from the tracheobronchial area.

The primary focus of infection in children is characteristically a basal lesion before the tenth year. It may appear as a circumscribed focal necrosis, as a diffuse irregular network, or as a more or less homogeneous density involving a part of the lobe. In general, this basal infiltration in childhood tends to clear up. Often the only evidence of its having existed is the finding of small deposits of calcium.

The apical infiltrations are more or less atypical in childhood. They are found, however, with comparative frequency, according to McPhedran, in children who live in the same house with open cases of tuberculosis. These apical lesions appear as soft strands proceeding from the pleura and diminishing toward the hilum, or as more or less blocked-out wedges, or as a mottling which is less well defined than in adults. The primary infiltrations in the upper part of the lungs of the child do not have so great a tendency to clear up as do the basal infiltrations.

Either one of these forms, that is, the basal or the apical infiltration, however, may advance rapidly without losing its original type. Again, it has been found that extensive and spreading infiltrations, particularly in the apical region, may exist for years without signs and without noticeable impairment to the health. Eventually, however, the great majority of such lesions, if unrecognized and untreated, will develop into manifest disease.

Up to about the sixth or eighth year the development of manifest disease in the lung of the child is considered the result of the direct extension of the primary focus of infection. Such disease tends to be acute and widespread. After the sixth or eighth year the manifest disease may be the result of a secondary infection, in which case it tends to be localized and chronic in type.

These infiltrations as a whole, for the most part, appear to rise close to the pleura either laterally, anteriorly, or posteriorly, and extend toward the hilum, often in wedge-shaped areas with decreasing density in contrast to the arborization of the trunk shadows, which diminish from the hilum outward; and when these clear, in like manner, they tend to clear from the periphery inward.

Doctor McPhedran has stated that if we compare the roentgenograms of excised lungs with sectioned specimens, and correlate these findings with x-ray exposures of the living where the exposures are synchronized to the heart beat, we can demonstrate that very slight changes in the parenchyma of the lung can be recorded in the films of the living.

The differential diagnosis of some of these lung infiltrations, particularly the homogeneous density of a large area of the lower lobe in nontuberculous pneumonia, rests on the typical onset in the child living in contact with sputum-positive tuberculosis, by the slow clearing of the density in the favorable cases as observed by the x-ray, by the

presence of an active tuberculin reaction and, at times, by the recognition of calcification in an associated lymph node.

The diagnosis and clinical significance of tracheobronchial glandular involvement have, in themselves, been subjects of much difference of opinion. Opie and McPhedran have found in their work that, with very few exceptions, the only definite evidence of tuberculosis of the tracheobronchial glands is the presence of calcium deposits as revealed by the x-ray. The exceptions to this dictum occur in rare fatal infantile cases where the gland may protrude sufficiently beyond the hilus shadow to be recognizable. Their extensive researches in the excised lungs and the lungs of the living have convinced them that without calcium deposits, glands involved even to the extent of caseation, either in the mediastinal region or in the hilus region, cannot be distinguished radiologically from the surrounding tissue. They conclude, likewise, that calcium occurs only in glands that are tuberculous.

Again, these same men failed to find any direct relation between D'Espine's sign and extensive involvement or calcification in the tracheobronchial glands. The enlarged glands, they found, do not extend to the spine except in a few rare infantile cases with massive caseation of the lymph nodes. The usual position of the involved glands is along the posterior or posterolateral aspect of the trachea.

In the same way they failed to find any definite connection between interscapular dulness and muscle spasm and enlarged tracheobronchial glands. The apparent widening of the hilus shadow, often described radiologically, may be found to be due to movement or to faulty position. Their conclusion is that there are no characteristic signs other than calcium deposits, and no symptoms due to uncomplicated tracheobronchial tuberculosis except in those very rare cases where it has extended through the capsule of the node.

They also found that D'Espine's sign, as well as paravertebral and parasternal dulness and bronchovesicular breathing in the interscapular region, occur in children that are normal.

Further, Opie and McPhedran feel from their findings that the so-called peribronchial thickening of the trunks and the apparent beading, which has more or less universally been given a pathological significance as an indication of the extension of the disease from the hilus region, should not be considered as such either in children or in adults. In a large series of specimens studied they found no pathological basis for the inference that this thickening is due either to a tuberculous or to a nonspecific respiratory infection. By the use of exposures synchronized to the heart beat they concluded that the apparent thickening of the trunks was due to movement set up in the accompanying artery by systole, and that the apparent beading was caused by branches coming off from the arteries at angles. We are not justified, then, in diagnosing tuberculosis by x-ray



findings without definite signs in the parenchyma or calcium in the glands.

Again, according to these authorities, another common diagnostic error which leads to false conclusions as to the pathogenesis of tuberculosis is the finding of apparent calcium deposits in almost all x-ray films of chests, particularly along the bronchi, where they branch, and in the region of the hilus. These shadows have been found to be due, in most instances, to vessels which are axial, or nearly so, to the incident or primary ray. In such cases the shadows of columns of blood of various lengths are cast on the films. They appear as dense areas, more or less clear and regular in outline. Such shadows may occur anywhere in the lung tissue except at the apex and in the extreme lateral margin. They are larger and more numerous in the hilus region, where the vessels are larger and more numerous. Shifting the plane of the x-ray tube will cause these shadows to disappear or reveal their true nature.

A calcified lymph node, on the other hand, may change its contour when the plane of the tube is shifted, but it will continue to be recorded as a shadow of consistent quality, finely and irregularly granular, or made up of softly lamellated or crenated lines, or irregularly stippled.

#### SIGNIFICANCE OF THESE OBSERVATIONS

The practical significance of these conclusions is, on the one hand, first, that pulmonary tuberculosis in the child is an involvement of the lung parenchyma; second, that this involvement may, and not infrequently does, progress to a considerable extent, where it exists in a latent condition, without giving any indication of its presence through physical signs or clinical symptoms; and, finally, that these latent lesions, unless discovered and treated rigidly, are prone later to develop into serious manifest disease.

The practical significance of these conclusions is, on the other hand, that in the absence of characteristic physical findings or clinical symptoms of tuberculosis in the chests of children, the evidence of a positive diagnosis rests upon a history of household exposure, sensitiveness to the tuberculin test, and x-ray evidence of parenchymatous involvement.

In conclusion, I realize that the last word regarding tuberculosis in the child's chest has not been said. The work of these men, however, which I have used as a basis for this paper, has been so thorough and so convincing that I feel it deserves our most thoughtful consideration. As Doctor Rathbun, whom I have already quoted, says, it is only by an energetic carrying on of this work by a large group of men and women and by a pooling of our knowledge as we go along that we can hope to arrive at anything definite.

129 North Canyon Drive.

#### DISCUSSION

WILLIAM M. HAPP, M.D. (523 West Sixth Street, Los Angeles).—Doctor Hayes has brought out some interesting points for discussion. One thing which should be kept in mind is the difference between the clinical as well as the pathological picture of pulmonary tuberculosis in infants and in older children. In the former the reaction is characteristically glandular.

The enlargement of the tracheobronchial glands is readily demonstrable by x-ray before calcification has taken place, even in young infants. It is important to have lateral as well as anteroposterior pictures to demonstrate this. Repeated x-rays are of more value than single examinations.

We have not found the primary focus to be a basal lesion. It may occur in any part of the lungs, and usually gives no localized physical signs. The reaction which takes place in the chest in children usually occurs in the glands draining the focus, in the hilum of the lung, or as an extension from the focus itself. Such types of tuberculosis are very common in children. The apical or adult type of reaction is seldom encountered before the tenth year.

Physical signs are usually slight, unless caseation or cavity exist. The chief diagnostic points are: the symptoms, fever, tuberculin test, and x-ray findings. Contrary to former belief, the prognosis in pulmonary tuberculosis in children, even in infants under one year, is relatively good.

Comparative clinical studies with repeated x-ray examinations, checked by careful pathological studies, should go far to clarify the subject of tuberculosis in children.

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LLOYD B. DICKEY, M.D. (Stanford University Medical School, San Francisco).—It is well to call attention to the fact, as Doctor Hayes has done in this paper, that the physical signs in a child's chest are seldom in proportion to the amount of tuberculous disease if the latter is present in a tuberculous child. This is one of the most important facts to be remembered by medical men who are trying to detect early tuberculosis in childhood. The group of children classified as cases of "latent tuberculosis" by Opie should not be neglected, even though they show, after careful history and physical examination, no manifest disease. No program aiming to control tuberculosis in school children is complete without means for careful observation of this group. It is possible that these are the children that are building up the resistance of the race to tuberculosis, and the care they receive during the so-called latency of their disease probably largely determines their reaction to tuberculous infection and reinfection in adult life.

Although we know that the primary disease in children is usually parenchymal, we still feel that when symptoms are present they are often due to the extension of disease to the lymphatic system, especially to the hilar lymph nodes. The parenchymal disease, if primary, may be relatively benign. This helps to explain the large number of positive tuberculin reactors that never show symptoms or signs of disease, and these children make up a considerable percentage of the cases of "latent tuberculosis."

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DOCTOR HAYES (Closing).—I am particularly pleased to have Doctor Happ and Doctor Dickey discuss my paper because of the work they have done in this field. They have emphasized the fact that the clinical symptoms and physical signs are often wanting or, at best, are indefinite and misleading in the case of pulmonary tuberculosis in children. Consequently we have to rely largely upon our history, specific tests, and x-ray study in this work, frequently repeated observations being important.

In considering pulmonary tuberculosis in children I think we should keep clearly in mind the fact that there are two distinct types. First, there is the type that results from first infection. This may be only a small area. On the other hand, it may be widespread and diffuse. This is the type that is accompanied by involvement of the hilus glands. This type, particularly if the source of infection is cut off and the general environment of the child improved, is relatively benign and tends to clear up. This form we ordinarily regard as juvenile tuberculosis.

The other type of pulmonary tuberculosis in children is that which results from secondary infection. It tends to be localized, particularly in the upper part



of the lung, and is characterized by a tendency to progress. This is the adult type.

The juvenile type may occur in adults, but I think is less frequent than the adult type in children.

The differentiation between these two types can be made, for the most part, through relatively frequent x-ray observation of the course they pursue.

## THE LURE OF MEDICAL HISTORY

### HIPPOCRATIC MEDICINE\*

#### PART I

By LANGLEY PORTER, M. D.

*San Francisco*

MODERN medicine prides itself on its efficiency and its continuing progress. Those who busy themselves in its activities believe that they can approach it only through the method of science. This method of science is a technique that calls for accurate observation; it calls also for precise recording of observations and for logical deductions from these records—and as well for the dispassionate application of these deductions to the solution of problems of life, death, and disease. The method of science is inevitably based on the philosophic conception that “order rules nature,” and that this “order” can be traced by the endeavors of man. In our day we take that ruling order, so far as it concerns biology and the applications of biology in medicine, to be expressed in the theory of organic evolution. However, we must realize that the theory enunciated by Darwin and developed by his successors leaves much unexplained, and itself is subject to evolution’s dictates.

Modern medicine has gone on from triumph to new triumph because it has been able to accept this hypothesis and to deal with man as a biological, evolving organism adapted to an environment. Today we think of the perfection of that adaptation as health, and deviation from it as disease. Without this informing idea, all the help of optics, chemistry, biochemistry and physics, the things which have continuously helped man to widen and deepen his medical knowledge, would have been futile.

#### MEDICINE OF ANCIENT GREECE

One of the miracles of history is that ancient Greece, 2500 years ago, should have been able to develop a medicine based on a study of nature; of cause and effect—a medicine that originated the method of science, even as we use it today; one which believed thoroughly in the healing power of nature—which admitted no influence of a supernatural kind, and eschewed miraculous cures, whether these were produced by medicine man, or priest, by charm, amulet or prayer.

For three centuries before Hippocrates—that is, beginning with Thales in 640 B. C., Greek scientists had been struggling to understand the ordered rule of nature in which they had so certain a faith. Thales himself, the first of the Greek thinkers known to us by name, and following him, Anaximander, Alkmaeon, Empedokles, Demokri-

tus, Pythagoras of Croton, and a score of other Ionians, had been arriving at the conception of a dynamic universe, a universe in flux; an infinity of actions and reactions, a cosmos in which matter was an exponent of ceaseless motion; a conception, in fact, not very different from that which our astronomers and physicists offer us today, when they urge on us the modern theories of spiral nebulae and of atoms made up of constellations of electrons, swarming about a central proton. This dynamic conception was not universally accepted, not even in Greece. Philosophers, among the most notable of them, Socrates, found the cold realities of observational science too forbidding, and sought solace in the abstractions and inspirations of metaphysics. After Socrates came Plato who, while a mathematician and philosopher of the highest order, developed in his academy a school that, in spite of Aristotle, proved in time to be detrimental to the progress of the biological sciences and of medicine.

#### THE IONIAN GREEKS

The mental, intellectual and spiritual qualities that create pioneers are just the qualities needed to develop scientific medical thinkers, and so it happened in Ionia. The arts, especially that art most essential to fighting, seafaring, adventuring people, the art of medicine, developed, becoming year by year more practical and more scientific, more based on a belief in the “rule of order in nature,” more divorced from magic, astrology, and things supernatural.

And why was the Ionian Greek so dominantly an individualist and a rationalist? The answer is inherent in the history of the race. He had the same spirit of pioneering that animated the forefathers of the American West. He was a colonist, a sailor, a trader, a professional soldier; success in all of those walks which depend on daring, on courage, clear thinking, curiosity, independence of character, decision and skepticism in the face of conservatism. Added to these reasons was the paramount influence of geographical position. The Ionian colonies lay at the crossroad of the world’s traffic: Egypt to the south, the Hittite empires to the east and, at the very gates, the islands and shores that were saturated with the culture of the Minoans of Crete, that island people who we now know dominated the Mediterranean world before our written history began. It was on this Minoan culture that the sure foundation of Greek civilization arose, and through the Greeks it became the basis of the European and Western culture of which we, today, are so proud.

#### IONIAN GREEK CONCEPT OF NATURE

These Greek Ionian philosophers had none of our modern instruments of precision, no telescopes or microscopes or stethoscopes; no physical or chemical methods, no x-rays, no photography. But by virtue of observation and comparison; with naked logic and clearly thought-out inference, they evolved a theory of the nature of the world and of man that was satisfying to the mind and which fitted in with all the known facts that had then been accumulated. This universe that

\*Read before the San Francisco County Medical Society, January 14, 1930.



they visualized was thought to be composed of four elements: earth, air, fire, and water; for each of these there was a quality—dry, moist, hot, and cold. There was also the *pneuma*—a life-sustaining fluid, a form of air, permeating the universe, which these students called the *macrocosm*. The *pneuma* entered with the breath into the body of man which was, in contradistinction to the universal "*macrocosm*," the "*microcosm*." From the activities of the *pneuma* in the body there arose the innate heat—the "fire without flame or spark," as Aristotle put it—truly a marvelous preview of oxygen, its powers and activities.

The *microcosm*—man—was made up of the four elements and the four qualities. In him the elements and qualities were represented by the four humours: phlegm, blood, yellow bile, and black bile. A man was healthy when the four humours were in perfect balance: "perfect *krasis*" the Greek would say. When one humour was in excess there was a "*dyskrasia*," an overbalance, and disease was the result; a theory not so unlike the views we subscribe to today in our theories of acidosis and alkalosis.

When phlegm, thought to be a secretion of the pituitary body, appeared in excess in abscesses, in colds in the head, in tuberculosis, and in the discharge of sputum, it was taken to be evidence of nature's attempt to bring about a cure by getting rid of the excess humour. In the case of abscess formation, or of empyema, a state of affairs in which nature is making an unsuccessful attempt to rid the body of an oversupply of the humour phlegm, the surgeon must intervene, incise the part and so help the body arrive at a rebalance.

The Hippocratic physician held the theory of the four elements and the four humours to be valid. Although apparently he let these theories influence his practice no more than the modern man permits the quantum theory of atomic structure to interfere with his treatment of tuberculosis or of appendicitis.

To bring the humours back to proper proportion after *dyscrasia*, or unbalance, a process of *pepsis* was thought to be developed in the body. This was conceived as a sort of ripening or cooking that developed under the influence of the innate heat. The result was a restoration of *krasis* and an elimination of any excess. Brock notes that in reality the process was thought of as a kind of digestion of the environment by the organism. The only essential difference between health and ill health was that in health the organism mastered its environment with ease; while in ill health the mastery was difficult, and the organism became conscious of disease.

The vast majority of the acute diseases seen by Greek physicians were malarial and tended to terminate suddenly on a certain day of the illness; this termination was called the "*krisis*." Diseases of long duration tended to end by slow recession, lysis, or else by what the Greeks called *apostasis*, which is translated by W. H. S. Jones as *abscession*—a term that is self-explanatory.

The Greeks taught that no hard-and-fast line can be drawn between physiological and patho-

logical processes. The process of coction of the humours they likened to the digestion of food and the expression of excreta after meals.

It appears that the daily task of the Greek physician at the periods when Greek medicine was at its best, was carried on, on a basis of accurate clinical observation, accurate recording, logical deduction and reasonable application of the deductions to the solution of the problems of daily practice. It is for this reason that the modern physician, reading the works of Hippocrates or Galen, finds himself more in sympathy with the mental processes of these writers than he does when he attempts to fathom most medical writings that originated in the seventeenth and eighteenth centuries. This is in spite of the fact that the doctrine of the four humours and the practical teachings of the Greeks dominated medical ideas until the first two decades of the nineteenth century.

#### HOW GREEK MEDICAL LORE REACHED OTHER LANDS

The story of the transmission of Greek medicine through Alexandria, Rome, and the Greater Greece that flourished in Sicily and southern Italy—of its emasculation at the hands of Syrian, Arab, and European; Jew, and monk, infidel and Christian—is fascinating but voluminous. Equally so is the record of its renaissance after the fall of Constantinople when, through the gateway of Venice, good Greek medical manuscripts found their way into Italy.

The sack of Mayence in 1426 drove artisans skilled in the newly developed printers' craft south to Italy; and books, among them many Greek medical texts, began to flow from Italian presses. Students and readers caught the infection of the Greek spirit. Little by little the distorted, shadowy interpretations, codifications and emendations of the great Greek authors which the Arabs and the medieval schoolmen had passed down, lost their authority.

Not only in science did the Greeks develop. All the world knows how the minds of their gifted men were taken up with the interpretation and revelation of the secrets of nature; how number and proportion and form and change of form intrigued them, and how out of these ponderings and peerings grew the understanding of the laws of proportion, of beauty and of their application to architecture, to sculpture, to vase painting, to literature and philosophy and metaphysics. Unfortunately some of their greatest philosophers tried to solve the problems by applying metaphysical formulas in the field of the mundane, and in doing so they began the rot and ruin of science and of the art of medicine that was to prove almost fatal a thousand years later.

Not all Greeks belonged to the gifted classes; the man in the street and in the tavern, the little householder and the proletariat existed then as they exist today, and perhaps were less affected by the theories of the Greek intelligentsia than we are—and much less influenced by the better thought of their own time than the people of like station are today. For there were no widespread



school systems, none of the modern means for the diffusion of knowledge that exist in these times.

So it need not surprise us that, then as now, scientific medicine was not generally accepted. In the parlance of the present, it had to sell itself to those it would serve, and that, as we shall see, was reflected in its great anxiety to be able to prognose well. It did not sell itself universally, perhaps not even widely, for we find it related that, side by side with the medicine of Hippocrates and other great exponents, priest-led theurgic medicine flourished and was richly supported by invalids who flocked to the temples of the healing gods for cures. Also, just as there is today a vast trade in patent medicine and proprietaries, a vast support for cultists and traffickers in miraculous and supernatural cures, so there was then a dominating folk medicine which used the services of astrologers, of magicians and sorcerers that put its faith in amulets, charms and incantations.

University of California Medical School.

(Part II of this paper will be printed in the April issue.)

## CLINICAL NOTES AND CASE REPORTS.

### A RARE SEQUEL TO GASTRO-ENTEROSTOMY\*

#### REPORT OF CASE

By E. ERIC LARSON, M. D.  
Woodland

THE first gastro-enteric anastomosis was made by Wolfer and Nicoladini in 1881. Since then there have been numerous modifications of technique designed to eliminate complications. At the present time the results of gastrojejunostomy are very satisfactory when the operations are done by surgeons of experience. The modern gastro-enterostomy is so performed that, in at least 90 per cent of these operations, complications do not arise.

We wish to emphasize an unusual complication which has been infrequently reported by both American and European surgeons.<sup>1-14</sup> Although rare, it always must be borne in mind when a patient, for whom a gastro-enterostomy has been done, is seen with evidence of an acute intra-abdominal catastrophe. Prompt operation will give complete relief; delay will be fatal.

#### REPORT OF CASE

Mr. J. E. G., forty-one, Portuguese, entered the Woodland Clinic on January 25, 1925, complaining of periodic abdominal distress of fifteen years duration, which was typical of duodenal ulcer.

For ten days before entry he complained of a rather severe recurrence of the same distress, but much more knife-like in character and constant after food. Alkalis had not been tried for relief. There had been no weight loss. Morphine had been given by his home physician for two or three days prior to entering the hospital.

Physical examination was negative except for: blood pressure 108 systolic, 60 diastolic; marked ten-

derness in the left epigastrium with no spasticity or rigidity, but with a defense tightening of the abdominal muscles on deep palpation. The urinalysis and blood Wassermann were negative. The blood count showed leukocytosis of 11,200, with 74 per cent polymorphonuclear leukocytes. Gastro-intestinal x-rays revealed a rather large duodenal ulcer.

On January 26, 1925, at operation, the stomach was found to be slightly distended and, on the anterior wall of the duodenum, was found the puckering scar of an old chronic calloused duodenal ulcer. On the posterior wall was found the crater of a rather large acute ulcer. The gall bladder was moderately distended, grayish white in appearance, but contained no stones. The appendix, showing evidence of much trouble in the past, was removed. A posterior, retrocolic, retroperistaltic, short-loop gastro-enterostomy was then done. The proximal jejunal loop was four or five inches in length. The mesocolon was carefully sutured by interrupted chromic sutures to the stomach wall above the gastro-enterostomy stoma. The abdomen was then closed in layers. The patient made an uninterrupted recovery and was dismissed from the hospital on February 12, 1925. On several visits to the clinic within the next three weeks he stated that he was perfectly well.

On March 8, 1925, forty-one days following the gastro-enterostomy, the patient returned to the clinic stating that he had been "poisoned" by his breakfast. Soon after eating he was seized by an excruciating pain in the epigastrium followed by copious vomiting which contained no blood. The pain and vomiting continued four hours when we saw him. At this time he was doubled up and screaming with pain, which recurred at short regular intervals.

On examination, the scar from the former incision seemed normal. There was noted a fullness in the upper left abdominal quadrant. On close inspection, it was seen that this fullness was getting larger rapidly, with the patient complaining of an oncoming cramp which grew progressively worse within the next minute until the pain became almost unbearable. With a stethoscope a gurgling was heard, following which the tumor mass disappeared and the pain ceased. There was no fever. The blood count revealed 8800 leukocytes, with 86 per cent polymorphonuclear leukocytes, and 13 per cent small monocytes. The urinalysis was negative.

A diagnosis of intestinal obstruction, incident to the gastro-enterostomy, was made. The patient's symptoms coincided with those of a similar case seen else-



Fig. 1.—Onset of migration of jejunum through opening left after gastro-entero-anastomosis.

\* From the Department of Surgery, Woodland Clinic, Woodland.



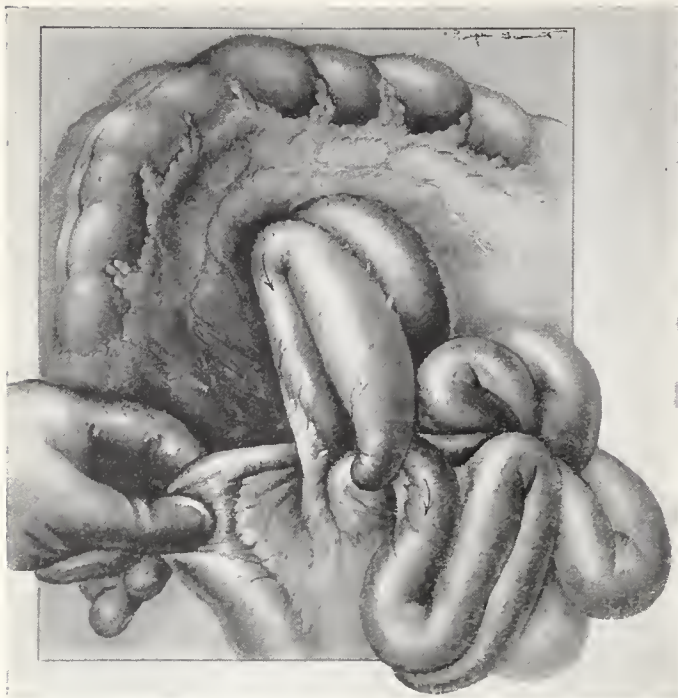


Fig. 2.—Internal hernia with complete intestinal obstruction caused by migration of jejunum through opening made between stomach, ligament of Treitz and jejunum.

where in which an acute intra-abdominal attack followed a Polya resection. In the latter instance, as proved at autopsy, there was a strangulation of the jejunum and ileum caused by the migration of the small intestine through the artificial aperture between the stomach, ligament of Treitz, and mesocolon. Because of the great similarity of the two cases, we made the same diagnosis on this patient and recommended immediate laparotomy.

At operation it was found that no adhesions existed between the former operative scar and the viscera. The mass in the left upper quadrant consisted of edematous loops of jejunum and ileum which had become strangulated following migration through the artificial aperture, always resultant upon gastro-enterostomy, the boundaries being the ligament of Treitz, the mesocolon, the stomach and the anastomosis. The loops were easily pulled back through the stoma and replaced in their normal position. No injury was done



Fig. 3.—Repair of opening left after gastro-entero-anastomosis.

to the anastomosis. Four interrupted chromic catgut sutures were then used to close the opening. The patient made an uneventful recovery and has remained well.

#### COMMENT

We feel that, by adding to the literature the record of this unusual complication, emphasis is placed on two important factors: first, prevention of such an occurrence; second, the fact that this complication should be constantly in mind when an acute intestinal obstruction occurs at any time following a gastro-enterostomy. In such a case delay for diagnostic procedures may result in alkalosis, hemorrhage, rupture of the suture line or edema, with death of portions of the intestines. Delay in reduction of the strangulation may entail a prolonged and serious operation in which the anastomosis must be torn down, the loops disengaged, and the anastomosis rebuilt.

1930 Wilshire Boulevard.

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#### THE SPECIFIC GRAVITY OF THE BLOOD

By JOHN MARTIN ASKEY, M. D.

Los Angeles

ALTHOUGH the specific gravity of the blood under varying conditions in the past has proved of little clinical value, it was used as an index to the hemoglobin percentage for years before the advent of the present methods. Tables were devised with corresponding values, which were inaccurate, however, due to failure to consider the effect of the color index.

Rogers<sup>1</sup> made use of it to determine the degree of blood concentration during the evacuation stage of cholera in the London epidemic of 1908 and the use of intravenous saline was predicated upon this factor. It was found that extreme dehydration raised the specific gravity to 1066 instead of a normal 1058 and indicated the necessity of intravenous saline. Recently Barbour and Hamilton<sup>2</sup> have reported a falling drop method for determining this factor and believe that it should be investigated again in various conditions.

Forty years ago, when venesection was common, actual weight of the blood was possible. The direct method, comparing the weight of the blood with an equal amount of distilled water, using the pycnometer, was feasible. This still



remains the most accurate, though obviously impractical.

Anemia, polycythemia, either true or relative, due to concentration by diarrhea, prolonged vomiting or sweating, the hydremic plethora following hemorrhage, should change the specific gravity.

Qualitative changes in plasma, such as the azotemia of nephritis and the hyperglycemia of diabetes presumably should alter it.

The present report includes the results of fifty determinations done upon whole blood by the Hammerschlag method.

TECHNIQUE

This method consists of suspending a drop of blood in a mixture of benzine and chloroform and carefully varying the concentration of each until the drop remains poised midway between the top and bottom. The specific gravity of that mixture, determined by the hydrometer, is then equivalent to that of the blood. Baumann<sup>3</sup> checked this method by the actual weight of the blood by the pycnometer in a number of experiments on dogs and concluded that it was a method "clinically easily applied and yielded, both in health and disease, results that were uniform and reliable," although the results are proportionately slightly higher than pycnometer determinations.

BASIS FOR PRESENT REPORT

In the studies reported here, determinations were made on the blood of fifty people, nine of whom were apparently in good health and the others suffering from varying conditions. Particularly the effect of conditions producing concentration of the blood from anhydremia, such as vomiting and diarrhea, was observed. A number of severe anemias were included in the study. It was hoped to discover some relation whereby the blood count of patients truly anemic, but concentrated by dehydration, might be determined accurately.

A blood count of five million in an originally anemic patient who has been vomiting persistently is of no value as an accurate count.

Two erythrocytic counts were done on each patient with pipettes certified as correct by the

United States Bureau of Standards, and an average taken. The hemoglobin determinations were done with a Sahli hemoglobinometer. The specific gravity readings varied from 1030 in a patient who had pernicious anemia to 1064 in one with a generalized peritonitis who had been vomiting for twelve hours. The latter was obviously dehydrated with dry, wrinkled skin, the former showed the well-preserved physique seen often in pernicious anemia. Determinations were made on several normal individuals at varying times of the day and the same figure obtained, contrary to the idea that diurnal variations were appreciable.

In the group of individuals that were considered normal the results ranged from 1049 with a red count of 4.49 millions and 90 per cent hemoglobin, to 1058 with a red count of 4.8 millions and 90 per cent hemoglobin. In seven instances of pernicious anemia the results ranged from 1030 in a patient with 1.1 million red cells to 1036 in a patient with two million red cells. The remainder of the patients were of widely diverse conditions, including heat exhaustion, filariasis, diabetes with high blood sugar and nephritis with high blood urea.

In a patient with strangulated umbilical hernia who vomited for three days there was a red cell count of 6.2 million, 104 per cent hemoglobin and a specific gravity reading of 1061. Another with peritonitis after twelve hours vomiting had 6.9 million red cells and a reading of 1064 for specific gravity.

There apparently was a very definite relation between the specific gravity of the blood and the quantity of hemoglobin present. With the color index, one, a reading of 1030 corresponded approximately with a count of 1,000,000 and a rise in red cells of 500,000 was accompanied by a corresponding rise of three points in the specific gravity. It was possible to predict very closely the red cell count by the specific gravity reading save in severe secondary anemia with marked disturbance of the color index.

Copeman<sup>4</sup> studied one patient who had a red cell count of 500,000 and a specific gravity reading of 1027. Blood serum specific gravity is approximately 1027. Those patients with a red

TABLE 1.—Ten Cases Showing Relation of Specific Gravity to Hemoglobin and Red Cell Count

Specific Gravity	Hemoglobin	Red Blood Cells	Color Index	Diagnosis
1. 1030	22	1,175,000	1.14	Pernicious anemia
2. 1030	24	1,180,000	1.1	Pernicious anemia
3. 1036	42	2,010,000	1.1	Pernicious anemia
4. 1045	71	3,600,000	.9	Secondary anemia
5. 1048.5	70	3,995,000	.9	Nephritis—blood urea 76
6. 1051	95	4,490,000	1.0	Normal
7. 1055	85	5,225,000	.8	Diabetes—blood sugar 190
8. 1057	95	5,650,000	.9	Arthritis deformans
9. 1060	104	6,170,000	.88	Asthmatic bronchitis
10. 1064	104	6,900,000	.9	Peritonitis—vomited for 12 hours

cell count higher than would be expected from the specific gravity reading were found to have a low color index. Conversely, those showing red cell counts lower than would be expected from the specific gravity reading were found to have a high color index. Thus, in one instance a specific gravity reading of 1030 was found in a patient with a red cell count of 730,000 and a hemoglobin of 25 per cent or a color index of 1.6. With a color index of 1 the red cell count here would be 1,168,000, which corresponds to the specific gravity reading of 1030.

Despite the variety of conditions studied, representing diabetes with high blood sugar, nephritis with nitrogen retention, and other metabolic disturbances, there were no significant variations in the specific gravity save those due to variation in the quantity of hemoglobin. Apparently the factor overshadowing all others in changes in specific gravity is the hemoglobin content, the constituents of the plasma exerting little influence.

#### CONCLUSION

The determination of the specific gravity of the blood is apparently of little practical clinical value and its addition to the ever-increasing list of laboratory procedures seems unnecessary.

902 Wilshire Medical Building.

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### SURGICAL TREATMENT OF STAPHYLOCOCCUS MENINGITIS

#### REPORT OF CASE

By GEORGE H. SCIARONI, M. D.

Fresno

**L**M., Los Banos, June 24, 1929. White, single, schoolboy, sixteen years of age. Referred by Doctor Mott.

**Family History.**—Grandfather died of tuberculosis at about forty years of age. Otherwise, family history good.

**Past History.**—Patient was born in New York. Came to California at the age of eight years. Had whooping-cough at the age of five years; measles at the age of seven years. Had his tonsils removed in 1925. Was operated on for appendicitis in 1926 and at the same time had a right inguinal hernia repaired. In 1928 he had severe attack of scarlet fever and was sick about three weeks, but fully recovered, apparently without complications or sequela.

**Present History.**—About June 10, 1929, he developed a small carbuncle on the back of the neck on left side near hair line. After a few days it was incised and drained. Six days later he developed severe pain in hip and calf of left leg with some fever. The following day he was brought to Fresno and had x-rays taken of the hip and leg, with apparent negative find-

ings. However, the back was strapped with adhesive plaster with no apparent relief. On June 24 he was admitted to the Union Hospital, at which time patient had a temperature of 104 degrees. The same evening he developed definite symptoms of spinal meningitis, and the following day I was called to perform a spinal puncture.

**Physical Examination.**—On inspection I found his general appearance very characteristic. He was a well-nourished young man, about five feet six inches tall, and weighing about 130 pounds. Lying straight in bed on his back with head drawn backward; with flushed cheeks and an anxious expression. His shoulders were drawn upward and his neck and back muscles were rigid. His respiration was somewhat labored. Pulse was 106, good quality. Temperature was 102.6 degrees. His abdomen was distended with gas. Upon auscultation his heart and lungs were negative. His lower extremities were extended, rigid, with heels drawn upward from tonic contraction of gastrocnemius and soleus muscles, causing his toes to point almost in line with the legs. He complained of severe pains in hips and legs, especially on manipulation.

**Treatment.**—The spinal needle was inserted between the first and second lumbar vertebra, and after considerable difficulty in getting the fluid through the needle, was successful in removing fifty cubic centimeters of thick, yellowish pus. At the same time injected antimeningococcus serum. The patient was immediately relieved and remained so for about two hours, after which his condition returned as before. The culture and microscopic examination of pus revealed *Staphylococcus aureus* in pure culture. Six hours later another puncture was made and about twenty cubic centimeters of pus removed. This time the canal was washed with antistreptococcus serum. Upon getting the laboratory report of staphylococcus infection, I suggested operative measures in hopes of establishing a permanent drainage. On June 26 the condition was progressively getting worse. Respiration was labored and marked cyanosis present. The upper and lower extremities were completely paralyzed except his hands and fingers, in which he had slight voluntary movement. Three punctures were made in the twelve hours. The last puncture, the needle was left in the spine with hopes of draining the pus and keeping down pressure, but very little drainage was accomplished on account of pus drying in the lumen of the needle and stopping the flow. Three hours later the needle was removed.

**Treatment Continued.**—On June 27, after a series of consultations, an operation was performed under ethylene anesthetic. A laminectomy of the second lumbar vertebra was done. Upon opening meninges, a large amount of pus drained into incision. The condition of patient was very bad, so a rapid closing was necessary and a small rubber drainage tube, surrounded by gauze, was inserted. Oxygen and stimulants were given: adrenalin, strychnin, etc. His temperature at 12 o'clock noon was 105 degrees. At 1 p. m. he was taken to surgery, and about 2 p. m. his temperature was 107 degrees. By 3 p. m. it dropped to 104 and by 12 o'clock midnight it was 98.6 degrees. At 4 a. m. it again returned to 104.6 and thereafter it ranged from 99 to 103. Nothing of much interest developed for about ten days except that his breathing steadily improved. About the middle of the second week he was able to move his arms. After the third week he could use his legs somewhat, and from then on the paralytic condition improved daily. On August 7 (which was six weeks and two days from the time he entered the hospital) he was discharged from the hospital with still a slight drainage from the wound.

312 Pacific Southwest Building.

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# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

## PELVIC INFLAMMATORY DISEASE

H. N. SHAW, LOS ANGELES.—Pelvic inflammatory disease is due to the following causes: in the order of their frequency, gonorrhea, puerperal infection and hematogenous infections, including tuberculosis.

Gonorrhea probably accounts for 95 per cent of cases of salpingitis, the chief damage being originally confined to the tubes. When the fimbriated extremity becomes closed off, and also the inner end, the pressure within the tube may cause it to rupture into and infect the ovary. This is the danger in this type of infection, and it is the reason that a hard and fast line cannot be drawn in regard to treatment. The infecting organism varies in virulence in different cases. An infection due to an organism which has lain hidden in the seminal vesicle, or prostate, for many years, will be very different from one which has come red hot from an organism picked from a street walker. In the latter case the germ has been passed from one contact to another at short intervals, and is extremely virulent.

Diagnosis from smears is exceedingly difficult. An individual may have germs concealed in the deep cervical glands, the inflammatory process may have closed the ducts of those glands, and smears made from the cervical discharge may be negative. This is the most dangerous type, as such an individual may squeeze out gonococci at the height of an orgasm, at the menstrual period when the cervix is much congested, or as the child's head passes through the birth canal in childbirth. The only smear from which a definite conclusion can be drawn is a positive one.

In acute salpingitis there is always pain, most often bilateral. Fever seldom goes over 103 degrees, and leucocyte count tends to be below 18,000.

Treatment of acute salpingitis should always be conservative. Surgery should not be considered until temperature and white count have been normal at least two weeks. There are exceptions to every rule. There are occasional cases where pus is present, and the temperature and leucocyte count remain elevated over long periods. We had a case in one of our wards for over five months without improvement which was finally operated upon. We found a left tubo-ovarian abscess that had ruptured into the lower sigmoid. The bowel tore across at the upper rectum and we had to make a permanent colostomy, closing off the lower end. This patient would have been much better treated had we operated three months before. Remember that 85 per cent of acute sal-

pingitis cases escape operative intervention. But, when you are convinced that a tube has been definitely sealed off do not hesitate to advise its removal, otherwise, it is like a sword hanging over the patient's head. A flareup of the process with further extension may damage the ovary. After the condition has become chronic, the question arises how much we should remove. If there is question of tubal patency, a Rubin test should be done, and a closed tube should be removed. The uterus should be removed or should not, depending on how smooth a surface can be left. If the uterus can be used to cover up a raw area, we advise leaving it. If, on the other hand, the surface of the uterus is raw, difficult to peritonealize, we advise its removal. If an ovary is badly infected, removal of the diseased tissue may seriously interfere with the veins leading from it. This means cystic ovary and another major operation within a few months. In these cases we have been trying ovarian transplants with very gratifying results in suitable cases. A piece of normal looking ovary, about two centimeters in diameter is chopped in small fragments and imbedded in the belly of the rectus muscle. Care is taken not to cause much bleeding. We expect to report results during the next year.

\* \* \*

KARL L. SCHAUPP, SAN FRANCISCO.—By pelvic inflammatory disease we usually mean a gonorrheal salpingitis or salpingo-oöphoritis, but we must also include other infections which involve the female pelvic organs.

Puerperal infection and infected abortions are the most dangerous to the life of the patient. The onset follows shortly after delivery or after instrumentation of the uterus. It is sudden, often beginning with a chill, followed by high temperature, rapid pulse and respirations. Pain in the lower abdomen and back are always present. The abdomen becomes spastic early and later may become distended.

This type of infection differs in its progress from the gonorrheal in that it follows the lymphatics rather than the mucous membrane of the uterus and fallopian tubes. These organs become involved, it is true, but by extensions through the uterine wall and broad ligaments. It is a metritis and parametritis rather than endometritis and salpingitis. This factor is important in the diagnosis and prognosis.

Where the condition primarily involves mucous membranes one usually finds rather clearly defined masses in the region of tubes and ovaries. The very slightly enlarged uterus can be felt and

may even be movable. There is marked tenderness on attempt to move the organs. With parametritis, infiltration of the lymphatics of the broad and sacro-uterine ligaments is profound, and causes the cervix, uterus and adjacent tissues to become so thickened and fixed that all that can be felt is often one large, fixed mass, brawny in consistency and giving the impression of having been poured from concrete. Discharge is usually scant and of a serosanguineous nature. The urethra is clean and cystitis does not often follow.

The blood picture is that of a profound infection, especially during the first few days. As the condition progresses a definite secondary anemia appears.

When the typical case is found one can predict that it will be of long duration, six weeks or longer, and the patient should be so advised. Unless there is diffuse peritonitis or septicemia, one of two things will probably happen; most often a gradual resolution of the inflammatory masses, with simultaneous improvement in the patient's general condition will take place, or at the end of weeks, localized abscesses may form, probably in the broad ligaments. Such abscesses usually contain much less pus than one would expect from the size of the mass of tissue involved.

The treatment demands patience for two reasons, the length of time necessary for either resolution or abscess formation to take place, and because early operative procedures merely tend to spread the process and endanger life. So much pelvic tissue is involved that it cannot all be removed. Bed rest is, of course, most important and should be rigidly enforced until the temperature has been normal for some time. Ice packs to the abdomen early in the condition are most grateful. Sedatives must be given, but here opiates are dangerous because of the length of time through which relief of pain is sought by means of drugs. Hot, prolonged vaginal douches seem to hasten favorable progress, but they must be very hot and must be given slowly under low pressure. At least two gallons should be used twice daily.

When abscess formation has taken place the treatment is surgical and a posterior colpotomy is sufficient. Laparotomy rarely becomes necessary, but when it does, except in unusual instances it should not be attempted for many months.

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CLARENCE A. DEPUY, OAKLAND.—In a short discussion of pelvic inflammatory disease, I would like to lay stress on two points which I think are most important: first, diagnosis; second, treatment.

In a service at the Alameda County Hospital which has extended over several years, I have been most impressed with the large number of cases of this disease which have been sent in by physicians with a diagnosis of "acute appendicitis," and a request for immediate operation. It is my belief that if the history, symptoms, physical

findings and laboratory findings which are usually quite distinctive, are carefully investigated, a correct diagnosis should be made and this, of course, influences the treatment.

As regards treatment, I believe that this has been well standardized by the men doing gynecology throughout the country. It is palliative until the acute symptoms subside, and then surgical in certain types of cases, especially where there are large infected tubes and ovaries. It may be necessary in some acute cases to resort to culdesac drainage. The indications for this are well marked by the symptoms and physical findings, such as bulging in the culdesac, and it is remarkable the relief obtained.

It is still the practice among men doing general surgery to do extensive abdominal operations on patients who have high temperatures and all the symptoms of acute pelvic peritonitis, and, I believe, that if the results of this type of treatment are investigated, it will be found that the mortality is high and the postoperative period quite stormy.

It is extremely rare that a patient treated by palliative measures will die of pelvic inflammatory disease, and certainly their postoperative convalescence is much smoother when operated on after their acute symptoms subside, and abdominal drainage is not necessary.

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EDWARD N. EWER, OAKLAND.—A patient with tubal infection almost always gives a history of previous attacks. As we evidently see the first attacks infrequently, it is probable that they are light in character and tend to recover with the rest made necessary by the pain experienced. With prolonged rest and heat applied to the lower abdomen by electric light baths most of these could be permanently cured, barring reinfection. Subsequent acute activations are thought by some authors to be reinfections from without or from gonococci still lurking in the original foci below the cervix. I have seen a first tubal infection follow at once upon the treatment of an acute gonorrhea with tampons, and Curtis believes that douching the vagina may force the organisms up through the cervix. Extension to the tubes occurs by way of the mucosa.

Pelvic pain, often bilateral, is present, temperature reaches 102 to 103 and the leucocyte count is seldom over 18,000. If there is much vomiting peritoneal reaction is suggested, and differentiation from appendicitis must be made. This is usually easy, for bimanual palpation elicits pain in the tube regions when the cervix is pressed upward, and if there have been previous attacks, masses may be felt on one or both sides.

In appendicitis the pain usually begins in the upper abdomen and finally localizes between the umbilicus and the anterior superior spine and there is more protective muscle tonus. The diagnosis between the two conditions is generally so



plain that there is seldom excuse for opening the abdomen in the presence of pus tubes.

Tubal pregnancy and ovarian cysts with twisted pedicles are diagnosed by the history and particularly by the fact that the blood sedimentation time is slow at the time the emergency demands attention, while in tubal inflammation it is around thirty-five minutes, or twenty or under if pus is present. Unless there is a large amount of pus these inflammations will recede after complete rest in bed, and tubes should rarely be removed till the sedimentation time has increased to sixty minutes. If it does not increase it is likely there is pus in the broad ligament cellular tissue or somewhere else and not in the tubes.

Two and one-half years' use of this test at Highland Hospital convinces us of its reliability, and the test is most easily made with the ordinary Linzenmeier tubes.

One patient with all the physical signs of acute pus tubes and a leucocyte count of 18,700 was operated upon with a tentative diagnosis of twisted ovarian cyst solely because the sedimentation time was eighty-five minutes. The condition found was hydrosalpinx twisted on the lax portion of the tube near the uterus. Acute tubal inflammation would have given a rapid sedimentation time and we would not have felt justified in operating.

When pus exudes from a tube and a pelvic peritonitis occurs a collection of pus may form in the culdesac. Rest then may not affect the rapid sedimentation time but there is no danger in delaying operation till the bulging vaginal vault proclaims the abscess. The same thing is true of the abscess of pelvic cellulitis. That condition is the result of extension of inflammation from an infected parturition wound in the cervix or upper vagina or from the wounds caused by curetting an infected incomplete abortion. These are lymphatic extensions through the parametrial tissues. If resolution goes on the sedimentation time increases. If it does not and pus forms the physical signs of abscess appear. These are mass formation and possibly fluctuation, felt on vaginal or recto-vaginal bimanual palpation. Incision behind the cervix evacuates the pus without danger.

The importance of blood sedimentation tests in pelvic inflammatory disease should be stressed. There are many articles on the subject in the medical literature of the last four years, and there is a particularly good one by Donald G. Tollefson giving technique and other information in the January 1930 number of CALIFORNIA AND WESTERN MEDICINE.

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New Ills for Old.—One by one, in a world which has ostensibly been made safe for democracy, the textbook pictures of medicine are stepping out of their pages and coming to life. Curiously enough, our furred and feathered friends—and to some extent our scaly ones—are responsible for these new health hazards. Bovine tuberculosis we have long had in our midst, until now, at least in some communities, it is practically hailed as a friend. The tapeworms of fish

and beef and pork have long delighted us with their picturesque infestations and we have shuddered in amazement at our own recklessness as we reveled in our raw pork, knowing well the dangers we ran of converting ourselves into ant hills of trichinae. Rabies, once practically banished, is now the prerogative of every dog owner, and he does not hesitate to expose his friends and neighbors (a subtle distinction) to the pleasures of a fourteen or twenty-one day anti-rabic course of treatment. Tick fever does not yet concern us in the East; if it did every Mary would have a little lamb to follow her to school.

Malta fever, once considered the exclusive property of the goats which leap from precipice to precipice on the rocky fastnesses of Gibraltar, has invaded our Southwest, and very recently a wave of undulant (not indolent fever, which is an industrial hazard) has crossed the continent like a storm cloud and broken upon the Atlantic Coast. The rabbits of Georgia are propagating themselves northward with the rapidity which is a peculiarity of their species, carefully conserving the tularemia which is their choicest possession. We are in danger of becoming a tributary to the animal kingdom.

Within a week of this writing a new shadow has fallen upon the land, for psittacosis (see Osler, William) has been discovered among the parrots of New England, and already many owners, trainers, and dealers have fallen prey to human psittacosis, a disease characterized, according to the dictionary, by high fever and pulmonary disorders. An edict has gone out from headquarters that all sick parrots (i. e., those with high fever and pulmonary disorders) are to be quarantined, and it is rumored that the disease may become reportable. Already, it is said, the parrot market is being raided by pet lovers and the supply is in danger of becoming exhausted.

If shark bite became communicable it is doubtful if the makers of aquariums could keep up with the demand.—Editorial, *The New England Journal of Medicine*, January 23, 1930.

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Thick Films for Diagnosis of Malaria.—The studies conducted by the United States Public Health Service relating to the prevention and eradication of malaria assume many interesting phases. A recent report of considerable interest issued by the service is that relating to a method of preparing and examining specimens of blood from a malaria patient on glass slides for the diagnosis of malaria.

Laboratory workers and others interested in the diagnosis of malaria have recognized the advantages of the thick film method, especially for malaria surveys. An assistant may be easily taught to collect good specimens and the method has been used widely and is successfully used in field work. Much time is saved in the examination of specimens. When the malaria parasites are at all numerous they are usually seen in the first thick film; when they are rare they are often detected in the thick film when they might have been missed in a thin film or found only after a long search. The chief purpose of the thick film is, of course, the diagnosis of malaria rather than the study of the characteristics of malaria parasites, a purpose for which the thin film is more suitable.

It is commonly recommended that fifteen to twenty minutes be devoted to a thin film before it is declared negative and five minutes to the thick film. In either case the time spent on apparently negative specimens must vary with the circumstances. When, for example, the sole purpose is to find a crescent carrier suitable for mosquito-infection experiments, a fraction of a minute will suffice for the thick film. In a clinical case it may be necessary to spend a good deal of time on a film; but here it is usually possible to get a new specimen taken at a time when parasites may appear in larger numbers.—*United States Public Health Service*, February 8, 1930.







*The Embarrassing Situation Which Arose.*—It was an embarrassing and difficult situation which confronted these two colleagues. They had made their preliminary report, as do members of our profession here and everywhere, at the request of colleagues who were interested. They distinctly stated that they were only reporting some experiments and observations and much additional work would be necessary before sound conclusions could be drawn. Because of the public interest which at once became so manifest, they were called upon to decide whether it would be wiser to permit the representatives of the press to have access to the information which was demanded, or to assume a semi-secretive or clam-like attitude and refuse to let the newspapers have the news information which the press representatives insisted on having. It was evidently a situation in which halfway measures would probably lead to worse results than would a course of frankness, and the latter course was therefore decided up only after consultation with California and Eastern colleagues.

The entire experience exemplified how marvelously rapid has been the development of news dissemination through the daily press in the last few years, and what a powerful factor the newspapers can be in spreading information on public health topics in which the people at large have some knowledge and more or less interest.

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*Origin of the Publicity Campaign to Promote a Better Understanding of Cancer.*—The receptivity of the lay public for more and better knowledge concerning cancer may be said to have had its foundation in the action in 1913, taken by the Congress of Surgeons of North America, when that body appointed a committee on publicity to spread a truer understanding of cancer among the medical profession and the lay public. Out of that action came the formation of the American Society for the Control of Cancer, and that and other organizations since that time have rendered more than yeoman service in a splendid educational campaign, in which many physicians have taken a prominent part, Dr. Joseph C. Bloodgood of Johns Hopkins University being particularly prominent.

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*Basic Efforts Against Cancer.*—In the 1926 Lake Mohonk, N. Y. Conference of the American Society for the Control of Cancer, an international symposium was held on cancer control. In the volume (Cancer Control, Surgical Publishing Company, Chicago, 1927) which contains the reports of that gathering, it is stated on page 2:

"It appears that the direction in which efforts can most hopefully be employed to cope with the scourge of cancer is through education. Apparently there should be:

(1) a widespread campaign to teach the public what everyone should know about cancer;

(2) a dissemination among the practitioners of medicine of information that would help them in diagnosing and treating the cases which come to them;

(3) adequate hospital provision for the care of curable and incurable cancer patients; and

(4) continued research in the cause, prevention and cure of cancer."

*Bloodgood's Outline of the First Publicity Efforts.*—In a paper printed by Bloodgood of Johns Hopkins in *Health* in March, 1922, entitled "Publicity Necessary for the Cure of Cancer," he made mention of the initial action of the Congress of Surgeons of North America and stated:

"The chairman of the first committee, my colleague Cullen of Baltimore, with great foresight conceived the idea that a number of articles be published in lay magazines and that these articles be written by an experienced and able lay writer, based upon facts obtained from the surgeons of great clinics in this country. These articles were written by Samuel Hopkins Adams and published in the *Ladies' Home Journal*, *Cottier's Weekly*, and *McClure's Magazine*. This was the first effort for publicity on cancer in the world, and although it is but nine years since it was launched, the evidence is conclusive as to the life-saving value of such publicity."

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*An Excellent Foreword by a Lay Editor.*—A foreword by the editor of *Health* to the above article by Doctor Bloodgood may also be of interest as showing the viewpoint of a layman:

"Cancer is today the greatest mystery of the human body. In spite of the wonderful increase in our knowledge of human diseases, we know little more about it than our forefathers did. Some day, this mystery will be solved. There are probably, today, in the world, one thousand trained men and women who are giving their lives to study and experimentation, trying to find out what causes cancer and how it can be prevented. When these questions can be answered, it will be a great day for the human race. Until they are, we can only use the knowledge we have."

The excerpts just given should make quite understandable how it has come about that the lay public of the year 1930 has almost as much interest in all efforts to conquer cancer as has the medical profession, and why every seeming advance in the fight against cancer is read with avidity.

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*The Publicity Given to the Coffey-Humber Extract.*—Of course it may be said that the publicity of Bloodgood and his colleagues was of a very different sort than the publicity which has been given by press representatives to the recent California studies which already are popularly known as the Coffey-Humber cancer experiments. So it has been, and on that account it may be worth the while to pause for a few moments to consider a few points before passing judgment.

Doctors Coffey and Humber made no claim of having discovered a cancer "cure." On the other hand, they invariably emphasized, in their several addresses before California medical organizations, that they had simply been carrying on certain experiments for many years in connection with their theory of malignant tissue growths; that they had succeeded in making an extract from the cortex of the suprarenal glands that had some interesting properties in relation to presumable action on the sympathetic nervous system, blood circulation and on malignant tissue; that they had not been able as yet to work out accurate or final dosage for their preparation; and that they needed a vastly greater amount of clinical material and observa-



tion before anything like final conclusions could be drawn concerning the efficacy of the extract or principle which they had isolated and which they were trying out in the treatment of cancerous tissue. Further, that they would refuse to accept patients on a fee basis; that they would give the treatment only to such patients who came with letters from their personal physicians; that they desired to have the remedy to pass through the regular course of scientific tests of all new preparations; that they did wish to continue their investigations, because the remedy did seem to have real merit in doing away with pain associated with cancerous new growths; and that they would be most happy if further experience would prove that the seeming selective action which the extract apparently had in dissolving or destroying cancerous tissue without seeming damage to normal cells should pave the way for a better method of treating cancer than at present existed.

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*Doctor Coffey's Friends Knew of These Studies.*—A year or more ago, Doctor Coffey told the writer, as he probably told others of his friends, concerning the studies being made by Doctor Humber and himself. It seems only fair, therefore, inasmuch as with what might at this time be called, over-great laudation in some newspapers there has also come considerable criticism to Doctors Coffey and Humber, that it should be generally known to their California colleagues, that Doctors Coffey and Humber did not rush to the lay press with reports of their studies.

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*As the Situation Stands at Present.*—All must concede that it would be a boon to humanity if their work would pave the way to new and better methods of treatment of cancer. But even if their studies should not bear such great fruit they will still have been participants in doing a real service in the attempts at conquest of this disease, through the great publicity which has been and will be given in medical and lay journals and in newspapers to a rediscussion of the entire cancer problem.

For be it remembered that publicity is what the leaders in the movement against cancer have felt was absolutely necessary. Publicity makes for interest, and interest makes for coöperation. When we become cancer-minded to the extent that we do not fear cancer; that we will use all present efficient methods in diagnosis and treatment; that we will carry on cancer researches with provision of ample financial backing from public funds and from the private purses of independently wealthy lay citizens—then we will also have the right to be so minded that we can feel assured that in the not remote future, cancer really will be conquered. Speed the day, and may these studies by our two California colleagues be important means to that end.

#### NARCOTIC PRESCRIPTIONS—CALIFORNIA NARCOTIC LAWS—FEDERAL NAR- COTIC ACT—PROPOSED PORTER NARCOTIC ACT

*Violations of California Narcotic Laws Subject Violators to Arrest and Notoriety.*—By order of the Council, a letter was recently mailed to every member of the California Medical Association. In that letter was stressed how important it is that all physicians should obey the state narcotic laws which were enacted in 1929 by the last California Legislature.

The special provisions of the amended California law (violation of which carries legal penalties) and which should be scrupulously observed by every physician who does not wish to jeopardize his good name and reputation through arrest and resultant newspaper publicity and notoriety, are those clauses which demand that every physician who gives a narcotic prescription must in his own handwriting, write with ink or with indelible pencil, the patient's name and address, the date of the prescription and his own signature. Other provisions make it illegal for either a physician or pharmacist to be parties to the dispensing on telephone orders, of prescriptions for narcotics.

The above are in the present provisions of the California law, and every physician licensed in California who fails to observe these statutes places himself in danger of arrest. If the statutes work improper hardships, then the attention of the officers and members of the California Medical Association should be called thereto, either through letters which could be printed in the correspondence column of CALIFORNIA AND WESTERN MEDICINE, or which could be sent direct to the central office of the Association.

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*The Federal or Harrison Narcotic Act.*—Practically all members of the medical profession have a personal acquaintanceship with the Harrison Narcotic Act, since every physician who wishes the right to prescribe narcotics is obliged to pay the annual federal narcotic tax to the Commissioner of Internal Revenue, and to comply with the other regulations in that law provided. When the Harrison act came into existence some years ago, it excited considerable criticism because of some of its provisions, but in the end the members of the medical profession throughout the country accepted the new federal law because its capacity for good in certain directions compensated somewhat for other inconveniences which were imposed.

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*The Proposed Porter Narcotic Law—"H. R. 9054."*—But now a new and additional federal regulation is proposed, not as a part and parcel of the Harrison act, but as a something else and separate. This new law has been introduced by Congressman Porter of Pennsylvania and is known under the title of "H. R. 9054." Members of all committees on public policy and legislation, representing California, Nevada or Utah county medical societies, should write to their local congressmen asking for copies of this bill, so that its



provisions may be studied, and reports thereon rendered to the respective county societies in order that appropriate action may be taken by the societies. Individual members of the California, Nevada and Utah Medical Associations who are interested should also feel free to write to their congressional representatives for copies of the proposed bill.

No matter how well meant this particular Porter act may be, it carries provisions which seem an infringement on the legitimate practice of medicine. It is another example of trying to do away with an intemperance evil or habit among certain classes of the lay population, through what seems little other than intemperate legislation. Like much of such intemperate legislation, it would, if enacted, probably fail to accomplish the perhaps laudable hopes of some of its enthusiastic proponents. It would, however, create a very considerable and unnecessary hardship to practicing physicians, and on that account would seem worthy of prompt and determined opposition from the medical profession.

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*Proposed Porter Narcotic Law Jeopardizes Fundamental Professional Rights.*—This proposed Porter act would obligate every licensed practitioner of the healing art, as well as members of the professions of dentistry, pharmacy and veterinary medicine, to secure from the United States Commissioner of Prohibition a separate license to dispense narcotics. The proposed bill has drastic provisions which would prevent any physician who had ever been convicted of ever so small a technical violation of a narcotic law of the United States or of a commonwealth from ever again receiving a license to prescribe narcotics! Such an ironbound provision, with other regulations which would centralize power in the hands of the Commissioner of Prohibition, indicate that this proposed Porter act, in addition to being obnoxious through duplication of narcotic licensure, could very easily jeopardize the professional reputations and livelihoods of a large number of physicians in the United States who unwittingly might violate some of the superlatively stringent provisions of the proposed law. No group of citizens desire an abatement of the narcotic evil more than do members of the medical profession. Because of the work which physicians are called upon to do in caring for seriously sick and injured persons, they must not infrequently prescribe narcotics. This regular and emergency function of members of the medical profession should not be surrounded by excessive red tape restrictions to be carried out under an autocratic lay commissioner or a bureaucratic board or subordinates.

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*Write to Your United States Senators and Congressman.*—It would be a very salutary experience to the United States senators and congressmen representing the states of California, Nevada and Utah, if every member, or at least the majority of members of the state medical associations of those three states would take the brief time to write to their representatives

requesting copies of "Porter House Bill H. R. 9054 and H. R. 9053," and then, after perusal, to send in a strong letter of protest, if their provisions are as obnoxious as are here most briefly indicated.

For the convenience of members of the profession in the three states, the names of the federal senators and congressmen may be found in this issue, in the "Public Policy and Legislation" column of the Miscellany Department. If you wish to safeguard yourself against future trouble in these narcotic matters, take the trouble to write to each of the two senators from your state who represent you, and also to the congressmen from your district. Do this before you forget it. Then when the time comes to later on more vigorously oppose the Porter bill, the officers of the California, Nevada and Utah Medical Associations will be in position to render more effective service, because these congressional representatives at Washington will have been previously made aware of the interest of the entire medical profession in these matters, and will have had time to study the justice of the contentions of the medical profession and to act accordingly.

#### CONSTRUCTION AND MAINTENANCE COSTS IN THE NEW UNIT OF THE LOS ANGELES COUNTY GENERAL HOSPITAL—WHAT OF ULTIMATE RESULTS?

*Last Month's Editorial Comments on the Los Angeles County Hospital.*—In last month's issue of CALIFORNIA AND WESTERN MEDICINE the action of the Council of the California Medical Association in calling attention to certain policies of the Los Angeles County General Hospital was editorially presented.

Mention was made of the massive new building now in course of erection. It was stated that this new building

"... will cost some \$10,000,000. Perhaps \$12,000,000 will be nearer the total cost of this new unit."

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*Board of Supervisors Objecting to the Costs.*—About one week after the above issue of CALIFORNIA AND WESTERN MEDICINE had been placed in the mails, the Los Angeles Times printed a leading article under the caption:

"Hospital Cost Out of Bounds—Construction Total Figures 50 Per Cent Overweight." Several sentences from that article are here quoted:

"... Two members of the Board of Supervisors emphatically declared they will insist that the cost of the completed building be held down to the original estimate of \$11,000,000.

"The hospital became the main topic of discussion at the Hall of Records yesterday when Supervisor Graves, chairman of the Building Committee of the board, issued a statement that indications are that the hospital will cost approximately \$16,000,000."

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*Views of American Medical Association President-Elect on Hospital Costs.*—On the same day, February 18, the Los Angeles Examiner printed a news dispatch from Chicago bearing on hospital costs throughout the United States. An applica-



tion of some of the items in this latter news item could be made to what has just been quoted from the *Times*. The Chicago news dispatch included the following:

"Reduction in the cost of hospital treatment was the keynote of the opening address at the Congress of Medical Education of the American Medical Association here today. . . . Dr. William Gerry Morgan of Washington, president-elect of the American Medical Association, voiced this demand. . . . He criticized the huge sums spent in building magnificent edifices for hospitals, and luxurious equipment. Much of this money should be diverted to maintenance, he said."

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*What a Staff Member Writes.*—On the same general subject is a letter received by the editor, from a fellow staff member of the Los Angeles County General Hospital, who wrote in commendation of the stand taken by the Council of the California Medical Association concerning the placing of county hospital patients in private hospitals, and who, among other thoughts, stated as follows:

" . . . I have always thought that such an institution as is being built (by the Los Angeles County Hospital) is going to be in great competition with private hospitals and private practice. . . . I have been on the staff for more than ten years, and while I do not in any way begrudge the 'indigent,' the 'pauper,' or the 'county charge' my professional services, I do object most strenuously to the county receiving money for their hospital care. . . . "

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*An Out-Patient Service Innovation—Protests Unavailing.*—The writer of these lines in CALIFORNIA AND WESTERN MEDICINE happens to be a member of the Advisory Medical Board of the staff of the "Los Angeles General Hospital, Unit No. One" (Unit No. Two is the Osteopathic Unit) and in common with two other colleagues on that board, two years or so ago gave expression to his belief that some of the innovations in the proposed new building were of such nature that the county of Los Angeles would be put to much useless annual maintenance expense, and that the architects should not prepare plans along such lines.

The particular provision or innovation to which he and his two colleagues entered vigorous objection was that which provided that in this massive, monolithic steel-cement structure, out-patients were to be treated not on the ground floor in an adequate out-patient dispensary, but on all the different wings and floors, in almost immediate conjunction with in-patient services.

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*Such an Out-Patient Innovation Could Add Greatly to Maintenance Costs.*—The immense elevator and other personnel cost, incident to carrying the increasing number of out-patients and relatives and friends to these different floors can be better understood when one keeps in mind the out-patient figures printed in last month's editorial, namely, 223,475 out-patient visits at the Los Angeles County Hospital, for the year ending June 30, 1929.

A large number of such ambulatory or such out-patients are accompanied by relatives or friends

all of whom would be obliged to go to the out-patient rooms in the different wings and on the different floors. Since most of the dispensary or out-patient clinics are held in the 8 to 10 a. m. hours, the heavy elevator traffic during such hours can be easily imagined. Furthermore, if the out-patient services increase as in the last five years it will become a serious question whether or not sufficient elevators could be installed to handle the enormous traffic.

The Los Angeles County Hospital out-patient service may be said to have been instituted so recently as the year 1925. During that year a total of 72,314 out-patient visits were registered. By contrast, for the year ending June 30, 1929, the total of 223,475 out-patient visits were registered. This is certainly an enormous increase for a brief period of five years. The question naturally arises as to whether this out-patient or dispensary service will continue to increase in such rapid manner and if so, what additional accommodations would be necessary; and could the accommodations which would be required be actually furnished under the system of handling these out-patients, which it is intended to put into operation.

It might be said that the dispensary hours could be made to cover a larger number of hours, but inasmuch as these out-patient services are largely manned by attending staff members who give gratuitous services to the indigent sick, and as these staff members must have their other hours of each day at their disposal in order to earn their livings in private practice, it would be evidently out of the question to have these clinics distributed through different hours, in order to take the morning peak loads off of the elevators.

Unfortunately (as the writer still sees it), he and his two colleagues on the Advisory Medical Board were outvoted, and provision for this experiment of so handling such an immense number of out-patients was incorporated into the plans which were drawn up by the architects and which were adopted by the Board of Supervisors. The writer and his two colleagues have never been able to make themselves believe that such an out-patient service plan as is above indicated would make for more efficient service to out- or to in-patients and are equally convinced that such a plan will add greatly to the maintenance and overhead costs, and would use money that could have been put to far better purpose.

Just how much this interesting experiment will amount to in initial construction costs and how much extra annual overhead it will necessitate is naturally hard to estimate. The writer has been tempted to believe that such a plan, when all extra employees and time lost in unnecessary questioning of nurses and employees by visiting relatives and friends are included, will lead to an increased annual maintenance charge that perhaps may be as high as fifty thousand dollars a year. Fifty thousand dollars is a high interest return on an endowment fund of one million dollars, and one million dollars is a very considerable amount of money, even though it is practically set aside as an endowment from the pockets of taxpayers. It



is well known that the tax-paying citizenship do not look with joy and approbation on annual expenditures of public funds, unless such funds are utilized in harmony with the best standards of economy and efficiency.

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*Should a Public Hospital for Indigents Excel All Private Hospitals?*—It would seem that a public hospital for indigent citizens could become a menace or pernicious influence to private hospitals and to private medical practice, when such a public hospital excelled in type of construction and equipment, the great majority of private hospitals in the United States. The writer has found that a goodly number of colleagues who know the details of the Los Angeles situation, apparently concur in his viewpoint. The same thought is brought out in the quotation from the letter received from a staff member, as indicated in the excerpt already made.

It is to these private hospitals that private citizens who are pay patients must go. With the present hue and cry concerning excessive hospital costs, would it not be natural for such private patients who do not belong to the indigent or pauper class, to feel that they should not be taxed to maintain institutional care for indigents, not only as good but actually superior to that which they themselves could have, and then only at heavy financial costs and stress?

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*What Influence Will This Hospital Have on Private Hospitals and Private Medical Practice?* If in the Los Angeles County Hospital, the state of California is to have the largest hospital in the world—so far as construction dimensions are concerned, it would seem fitting that a serious attempt should be made to have it become at the same time, an institution where maintenance charges would represent a very maximum of efficient end results for the funds which are to be provided by the taxpayers.

In last month's editorial comments, a quotation was made from the last annual report of the Los Angeles County Hospital in which it was stated:

"During the present year its per capita cost per day for in-patients was \$5.272 and per out-patient visit, \$1.235."

The question naturally arises as to whether the per capita cost per day when the new building is completed, will be materially decreased or increased.

Ten million dollars for a single division of one public county hospital, a few years ago, would have been looked upon as an appalling figure. If the totals exceed that sum, to become a possible twelve to sixteen million dollars for the addition of some fifteen hundred additional beds to the institution, and if the annual maintenance charges, because of peculiarities of construction and of arrangements or methods, will run into figures considerably above the costs of private hospitals, then it may be questioned, perhaps, whether something less massive and grand might not have served the indigent sick and injured of Los Angeles County to as good or to better advantage.

And if the massive building should become a visual invitation to lay citizens to contemplate the

presumable advantages of so-called state medicine, the members of the medical profession, not only of Los Angeles County, but of California and other states in the Union, will have something to think about.

We must all agree that it will be most interesting to note the different influences and effects which this large public hospital, now in course of construction for the care of indigent citizens of Los Angeles County, will have on the lay public, and on private medical practice, both in and beyond the geographical domain of that county.

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Bar Association Approves Psychiatric Study of Criminals.—The American Bar Association went on record in its last annual meeting at Memphis, Tenn., approving the scientific treatment of criminals as a basis for law enforcement, the employment of experts on mental disorders by criminal and juvenile courts, penal and correctional institutions, and the filing of psychiatric reports in felony cases.

This action was based on a report of the Section on Criminal Law and Criminology headed by Dean Justin Miller of the University of Southern California Law School, which the association adopted by a majority vote. The section has been coöperating for the past two years with committees of the American Medical Association, the American Psychiatric Association, and the Social Science Research Council in a comprehensive study of the relationships of medicine and law, with special attention to the psychiatric aspects of medico-legal problems arising from mental disorders.

The association's committee on psychiatric jurisprudence, upon whose studies Dean Miller's report was based, he said, was not prepared to report upon its study of criminal law procedures involving insanity problems arising in the actual trial of the criminal case. These problems he pointed out are peculiarly difficult and will require further intensive study. The present report, therefore, confined itself to those problems which are represented after the verdict or plea of guilty. The following resolutions were adopted by the association:

I. Resolved: That the American Bar Association go on record as stating the following matters to be desirable:

1. That there be available to every criminal and juvenile court a psychiatric service to assist the court in the disposition of offenders.

2. That no criminal be sentenced for any felony in any case in which the judge has any discretion as to the sentence until there be filed as a part of the record a psychiatric report.

3. That there be a psychiatric service available to every penal and correctional institution.

4. That there be a psychiatric report on every prisoner convicted of a felony before he is released.

5. That there be established in each state a complete system of administrative transfer and parole, and that there be no decision for or against any parole or any transfer from one institution to another, without a psychiatric report.

II. Resolved by the American Bar Association that the various state and local associations be requested to give consideration to the recommendations in Resolution "I," as a part of their programs during the coming year, and for this purpose to secure the coöperation of their respective state and local medical associations.

III. Resolved that the Committee on Psychiatric Jurisprudence be continued for further study of this field, in coöperation with committees for the American Psychiatric Association and the American Medical Association and that it be empowered to adopt such means as in its judgment are best suited to effectuate the purpose of these resolutions.—*Mental Hygiene Bulletin*.

# MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

## Medicine

**Neurocirculatory Asthenia.**—With the passing of the World War, there passed from the literature reference to a confusing clinical syndrome, neurocirculatory asthenia. First referred to by Da Costa during the Civil War, it was later recognized by others. During the past war it was also much spoken of. Lewis stated that of about seventy thousand soldiers returned to British hospitals for cardiac insufficiency, approximately 10 per cent had structural heart disease. Though fashionable in the war-time literature only, this condition is important at all times, being not solely a soldiers' ailment. Present in the civil population also, male and female, its great importance lies, not in itself, but in that it gives a peculiar picture, the main symptomatology of which is cardiac, and so leads to erroneous cardiac diagnoses. The type of patient concerned is one, usually, to which such a diagnosis spells disaster—the depressed, blue, melancholic, introspective type.

The condition is variously named neurocirculatory asthenia, from the generally apparent pathology; irritable heart, from the most pronounced symptoms; and effort syndrome, from the immediate, in contradistinction to the ultimate, etiology. Present in the second and third decades, occasionally in the fourth, with no particular predominance in male or female, it is common in the tall, thin, visceroptotic type, those who have cold hands and feet, those who perspire readily, flush and pale noticeably, have attacks of dizziness, palpitation, and even apparent dyspnea, this latter usually taking the form of sighing. They tire easily, complain often of precordial and other vague pains of variable nature and shifting distribution, and of insomnia. They are often introspective and depressed. Gastro-intestinal disturbances occur, usually constipation, atonic or spastic, an easily upset stomach with nausea, and, less commonly, vomiting. The temperature is often erratic.

Physical examination shows little; perhaps palpitation and a slightly increased temperature. The general impression is that of the type of constitutional inferior. Laboratory work may be negative; slight anemia is not infrequent. The blood pressure may be low, but is usually normal. There being all grades of severity of the disturbance, the symptoms must also vary.

Many do not present the typical physical picture or symptomatology because of a difference in etiology. In the typical case the etiology is probably endocrine. Focal infection is, however, not an uncommon etiologic factor. In such cases, we see, not the typical picture presented above,

but only the disturbances which brought the condition to attention, the palpitation, with perhaps atypical precordial pains, and easy fatigue. There may more frequently in this type be secondary anemia and pallor, but not flushing. Another etiology becoming more frequent daily is that of industrial poisoning, perhaps most commonly benzene, lead, and carbon monoxid. Lack of recreation is also a factor.

Many consider this condition to be the incipient stage of exophthalmic goiter, and, while the resemblance is striking, the proof is lacking. Of course, in the non-endocrine cases this is not to be considered. However, in differential diagnosis one should always rule out exophthalmic goiter and tuberculosis.

Therapeutically, little can be said in regard to the typical case, the constitutional inferior, although the following may be tried, often with benefit: the judicious use of sedatives and stimulants; the care of anemia, if present; cold baths, salt rubs, the cold affusion, physical therapy, exercise, the use of abdominal supports where indicated, proper selection of occupation and avocation, general hygiene, endocrine therapy, and even psychotherapy. Focal infections should be eliminated. In cases due to industrial poisoning, and in those due to lack of recreation, the remedies are obvious.

But, remembering the mental condition of the patient, the avoidance of an erroneous diagnosis of cardiac disease is most important. This may require extensive observation, but it should usually be possible to make a decision more or less immediately. The past history is important. The cardiac examination is usually negative except for palpitation; and during the time of life that the effort syndrome appears, the cardiac disturbances such as angina pectoris, coronary thrombosis, etc., which show an apparently normal heart on physical examination, are quite uncommon.

In any case presenting cardiac symptoms the effort syndrome should be kept in mind.

LOUIS BALTIMORE, Los Angeles.

## Medicine

**Treatment of Anaërobic Toxemia in Bowel Obstruction and Peritonitis.**—In the discussion of toxemia resulting from organic bowel obstruction or peritonitis, the early diagnosis and early surgical intervention must always be stressed. As long as the patient fails to call a physician early or is treated by a physician who does not recognize the early symptoms indicative of the above conditions, late intervention will continue to result in a mortality of 25 to 50 per cent.



We must be ever searching for any procedure or therapeutic agent which will help to lower this mortality.

*B. welchii* and many other anaërobes are present in the lower ileum. Dudgeon cultivated *B. welchii* from the stools of 35 per cent of 200 ward patients; Williams cultivated *B. welchii* from the vomitus of eleven out of nineteen cases of bowel obstruction; nineteen out of twenty advanced cases, and no cultures from three cases of pyloric obstruction. *B. welchii* toxemia from the vomitus inoculated into thirty-two mice produced lethal effects in twenty-one. In sixteen controlled mice protected by antitoxin, no deaths occurred from inoculation. Davis and Stone proved that succus entericus did not produce toxic symptoms when injected intravenously into animals, but when the juice was permitted to stand and bacteria proliferated, it rapidly became toxic. Bernheim and Whipple, Cannon, Dragestedt and Dragestedt were able to show that bacteria in the lumen is necessary for the production of toxic substances.

A great deal of experimental evidence by many workers has associated the toxemia with the presence of *B. welchii* and *B. vibrio septique*, *B. edematus*, and other pathogenic anaërobes. At present I believe that the practicing surgeon must accept this view.

Bower and Clark concluded that gas gangrene antitoxin must be given favorable consideration as a therapeutic agent of probable value in the toxemia of acute intestinal obstructions and of peritonitis.

Williams reports reduction in mortality in appendicitis from 6.3 to 1.17 per cent, and in bowel obstruction from 24.8 to 9.3 per cent. Michel treated suppurative appendicitis with peritonitis with polyvalent serum with similar results. Michel gives Delbet the credit for first using serum.

Under no condition is the use of polyvalent anaërobic antitoxin to be substituted for the rational surgical treatment. The obstruction must be dealt with surgically, enterostomies performed, if, in the opinion of the surgeon, they are necessary. Chlorid deficiency must be supplied by normal salt solution subcutaneously and two per cent salt solution intravenously. Sedatives are indicated for rest, stomach tube for drainage of upper intestinal tract, spinal anesthesia for the relief of distention, and the promotion of peristalsis must always be thought of particularly in ileus. Blood transfusion is unmistakably of value. If there is infection of the operative wound with anaërobic bacteria, then this wound must be debrided, drained, wound irrigated with Dakin's solution or a mild acid solution. Free chlorin and weak acids destroy the toxin of anaërobic bacteria.

Patients are desensitized by use of a small quantity of tetanus antitoxin or diphtheria antitoxin. One hundred cubic centimeters of polyvalent anaërobic antitoxin with 100 cubic centimeters of five per cent glucose is given intravenously, 100 cubic centimeters of serum is injected intramuscularly, intrafascially and intracellularly around the wound. At the end of twelve hours, 100 cubic centimeters is again given intravenously.

The patient receiving the antitoxin becomes less restless, the pulse rate diminishes, temperature and distention are reduced and the jaundice, if present, is lessened. It is our hope that patients suffering from toxemia, due to bowel obstruction or peritonitis, will receive anaërobic antitoxin.

EDMUND BUTLER,  
San Francisco.

### Medicine

**I**ncreasing Weight in the Nondiabetic by Means of Insulin.—The specific effect of insulin upon the diabetic individual is accompanied by a marked nutritional and general improvement. Stimulated by this observation, investigations followed in cases of a glycosuric nutritional impairment, and beneficial results were obtained. Cachexias, malignancies, tuberculosis, anemias, vomiting of pregnancy, Graves' disease, etc., were, consequently, treated with insulin.

The response to the administration of insulin is an expression of its specific influence upon the complicated metabolic mechanism of the body. And in cases of impaired nutrition, when the intermediary metabolism—the cellular behavior—is undoubtedly altered but gross pathology is strikingly absent, as in anemia and chlorosis, the cellular and general metabolism is affected and happily influenced.

Our modern age, characterized by its haste and nutritional indiscretions, tends to promote metabolic disturbances by this faulty hygiene; and the anemic and chlorotic patient is common, more especially in the large industrial centers. In these patients insulin administration has given excellent results.

*Indications.*—Anemic or chlorotic younger patients, mostly women, with an obvious malnutrition sponsored by pernicious food habits, constitute the majority I have so treated. Occasionally are seen patients with constitutional asthenia, with a generalized, perhaps slight, enteroptosis; or with latent tuberculosis; or with mild thyrotoxic symptoms—even in cases of beginning Graves' disease—and not too far progressed active tuberculosis, with greatly reduced desire for food intake and with steady loss of weight. Yet, despite the varying pathology, the results obtained by treatment with insulin are equally satisfying. The nutrition of these patients improved, anorexia disappeared, and a sense of well-being naturally followed.

*Method of Administration.*—To test the sensitivity of the patient, the initial dosage should be small, approximately five units. No severe hypoglycemic reactions will thus occur. Insulin is given twice daily, one-half hour before mealtime. Every three to five days, the dosage may be increased to ten, twenty, thirty, and even fifty units. The alert individual may be taught self-administration. A special diet is unnecessary. It is well, however, to include a minimum of fifty grams of carbohydrates in each meal, raising it according to the amount of units administered, a task easily accomplished in the ordinary menu.

*Reactions.*—Every patient should be taught the possibility of hypoglycemic reactions, their pre-



vention, and treatment. The feeling of weakness that first occurs is soon followed by nervousness, dizziness, perspiration of the forehead, marked hunger, and the sense of impending collapse. To guard against hypoglycemic reactions, patients are advised to carry sweets, candy or sugar, on their person. By taking sweets fifteen minutes after injection, and upon the slightest feeling of weakness, a reaction will be avoided. With the administration of rather large doses, reaction may occur repeatedly after several hours.

**Effects.**—During the first few days of treatment, no great alteration in appetite may be noted: improvement soon occurs, however, and patients with habitual anorexia consume an increased quantity of food with avidity and pleasure. After one week, several meals three or four hours apart are taken and food is often eaten between meals. The increased appetite and food intake is followed by a gain in weight of approximately two to three pounds weekly. Eating becomes a pleasure and a sense of well-being results. And in those patients previously addicted to laxatives regular defecation replaces a chronic constipation. The increase in weight does not, however, continue *ad infinitum*: for, after three to six weeks of treatment, using fairly large quantities of insulin, the body becomes refractory, and even greater quantities of insulin have no further effect. The increased weight is maintained for six to twelve months after completion of treatment, or even longer. In hyperthyroid cases the action of insulin, derived from the pancreas, can readily be explained, since the pancreas is an antagonist in action to the thyroid gland.

**Failures.**—The efficacy of insulin therapy is more dependent upon the susceptibility and response of the patient than upon the quantity administered. From the vast clinical experience of M. Levai about 20 per cent of cases treated as described failed to react successfully. With patience, rest and diet, seemingly refractory cases can be influenced.

**Summary.**—Insulin therapy is of distinct value in the malnutrition of the nondiabetic individual, whatever the causative factor may be. If the patient is properly instructed, and this advice is followed, ill effects do not occur. The treatment must certainly be individualized. And a gain in weight of two to three pounds weekly for approximately four weeks will result.

FREDERIC WAITZFELDER,  
— Los Angeles.

### Ear, Nose and Throat

**New Theories About Common Colds.**—All attempts to find a specific microorganism of common colds have met, in spite of many claims to the contrary, with failure. Newman, in an extensive bacteriologic study, has found the total number of bacterial species in colds equal to nineteen, with none of them as a specific cause. Krause demonstrated in 1914 that not only bacteria but their filtrable virus is able to produce coryza. Foster repeated and confirmed the experiments of Krause. Dochez demonstrated the

same fact on apes. These observations prove that the presence of bacteria is not a necessary factor in exciting nasal colds.

As to chilling as a cause of colds, Schade in 1919 analyzed extensive statistical material of the German army during the last war, and found that the incidence of acute respiratory diseases was four times as great among troops exposed to unfavorable weather as among the sheltered. Mudd and Grant in 1921 published their experimental observations on students with chilling of the body by electric fans, as a result of which colds in the nose and throat developed. At the same time the authors noticed that, as a result of vasoconstriction, blanching and ischemia occurred on the mucous membranes of the pharynx, accompanied by a fall of temperature thereon equal to 1.42 degrees. A few other authors (Tschalusow, Cocks, Galeotti and Jackson) made similar observations.

These experiments compel us to replace the former false assumption of congestion of the mucous membranes, due to chilling and cold, with a new conception of a stage of blanching and ischemia of same. Mudd and Grant advance a hypothesis that ischemia may play a part in inducing infection by decreasing cell respiration, by retarding removal of products of cell metabolism, by increasing or decreasing the local supply of specific antibodies, by altering the state of aggregation of the colloids of the protoplasm, or a combination of the above factors, so as to disturb the equilibrium between host and parasite and to excite infection.

The new fact that an acute nasal cold can be produced by a filtrable virus of Krause and Foster, can be explained best by the anaphylactic theory of infection.

Immunity and infection, according to this theory, rest in the ability of tissue cells to combat through their proteolytic enzymes the invasion of both bacterial and nonspecific proteins. These enter as a result of parenteral ingestion through nonresisting mucous membranes. The degree of immunity depends upon the affinity which the body cells have for protein and the ability of the amboceptors to select and appropriate from the complex protein molecule, through cleavage, that stage of aminoacid which is not only harmless, but made useful by the tissue cells themselves. Incomplete cleavage or digestion of the protein molecule sets free toxic products which result in tissue irritation and disease.

Among factors predisposing to colds, presence of nasal or pharyngeal pathology plays an important part. Persons with definite pathological conditions of the nose and pharynx are inclined to infection more often than normal individuals, because their tissue cells are less active and lack protective arrangements due to chronic inflammation. The hypertrophic condition usually associated with chronic inflammation, exposes a larger field to the action of foreign protein, thus making them always more susceptible to anaphylactic shock in the form of coryza or pharyngeal cold.

BENJAMIN KATZ, Los Angeles.



# STATE MEDICAL ASSOCIATIONS

## CALIFORNIA MEDICAL ASSOCIATION \*

MORTON R. GIBBONS.....President  
LYELL C. KINNEY.....President-Elect  
EMMA W. POPE.....Secretary

### OFFICIAL NOTICES

**Results of Nonpayment of Dues.**—Membership in the California Medical Association, by reason of nonpayment of dues, ceases on April 1 of any year and all privileges of membership, including receipt of CALIFORNIA AND WESTERN MEDICINE, also cease. The names of such delinquent members are removed from the April mailing list.

This notice is intended to remind all members who have not yet received the 1930 card of membership in the California Medical Association that their dues have either not been paid to the county secretary or not reported to the state office. It should incite such members to an investigation of the reason why no membership card has been received. Otherwise the April and subsequent numbers of CALIFORNIA AND WESTERN MEDICINE will be missing. As this office orders only a limited excess number of copies each month, missing journals can seldom be replaced.

Be sure you hold a 1930 card of membership. If not, telephone your county secretary, and pay your 1930 dues before the first day of April.

**Concerning Care of Out-Patients in Dispensaries.**—The following resolutions were passed by the Council of the California Medical Association at its meeting of January 18, 1930 to cover certain underlying principles in the care of indigent sick and injured citizens of California:

**RESOLVED,** By the Council of the California Medical Association that, in its opinion, public hospitals of California supported by taxation should not maintain certain institutional activities in the care of the indigent sick when such activities might ultimately lead to ill results to the public health and to medical science standards; and be it further

**RESOLVED,** That in the viewpoint of the Council of the California Medical Association, when public hospitals, such as county hospitals, maintain out-patient or dispensary departments, and charge admission or treatment fees of such patients, that then such out-patient departments of public hospitals could, and in nearly all instances should, very properly refer all outpatients, with the exception of indigent patients who can pay nothing, and of other special classes listed below, to other out-patient dispensaries or institutions of good reputation in the same communities, when such exist. The exceptions are: (1) ambulant patients who have been in-patients, on whom it is desirable to have a follow-up supervision; (2) outpatients suffering from conditions liable to shortly make them possible in-patients.

In the opinion of the Council of the California Medical Association, the California law intends county

hospitals to supply professional services and hospitalization only to the indigent sick and injured, and county hospitals existing under the general California law should observe this fundamental rule and law.

### COMPONENT COUNTY SOCIETIES ALAMEDA COUNTY

The Alameda County Medical Association was fortunate indeed in having as their guest speaker on the evening of January 8, Dr. Morris Fishbein, editor of *The Journal of the American Medical Association*, who spoke on "Fads and Quackery."

The regular meeting of the month was held in Hunter Hall on January 20, being called to order by President Meads at 8:20 p. m. The program of the evening was presented by the staff of Fabiola Hospital and consisted of four interesting papers. The first was by Dr. Don D. Weaver, who talked on the "Treatment of Surgical Shock." Doctor Weaver had made a survey of the treatment used in most of the large institutions in the United States, the majority of whom agreed that the treatment should be directed against such outstanding symptoms as loss of body heat, relief of pain, alterations in blood pressure, etc. Patients should be kept warm, pain and restlessness should be relieved by morphin. Drug stimulants are of very little value, the best supporting measures being the intravenous administration of glucose solutions or of solution of gum acacia or, best of all, transfusions with whole blood. It seemed to be the consensus of opinion of all authorities on this subject that there is no substitute for whole blood in the treatment of surgical shock.

The second paper of the evening was by Dr. T. C. Lawson on "Cancer of the Cervical Glands." The doctor outlined the various types of tumors which may be found in this region, but limited his discussion to metastatic growth from primary tumors of epithelial origin. He reviewed the anatomy of the lymphatic system and discussed the glands most frequently involved, pointing out the common sites of primary tumors of the skin and mucous membranes of the head. In the treatment of the condition, Doctor Lawson urged early, wide, and extensive dissection of the lymphatics.

Doctor Holcomb spoke on "Rotary Lateral Curvature of the Spine," showing slides of patients suffering with the condition, together with various methods of mechanical treatment.

Dr. O. R. Etter was the last speaker of the evening, taking as his subject the "Diagnosis of Chronic Gall-Bladder Disease." The doctor felt that the two most important aids in determining pathology of the gall bladder were a proper history and physical examination. Various laboratory procedures were, to his mind, secondary.

Dr. O. D. Hamlin spoke at some length on the cost of medical care and outlined some of the work of the California Medical Association in an attempt to offer solutions of the question "How shall the doctor be paid in these cases?" Doctor Hamlin called attention to the *Survey-Graphic* of January 1930, in which there are a number of articles by both lay writers and physicians on this subject.

The meeting was adjourned out of respect to the memories of Doctors Herbert DeLoss, Ward M. Beckwith, and Frederick W. Browning.

GERTRUDE MOORE, *Secretary*.

\* For a complete list of general officers, of standing committees, of section officers, and of executive officers of the component county societies, see index reference on the front cover, under Miscellany.

## CONTRA COSTA COUNTY

The Contra Costa County Medical Society held its regular meeting on February 11 in the Chamber of Commerce rooms, Richmond, with President J. W. Bumgarner in the chair.

The minutes of the previous meeting were read and adopted. Dr. J. M. McCullough gave a report on his attendance at the Contra Costa County Health Association meeting, stating that Dr. I. O. Church, county health physician, was investigating the incidence and origin of tuberculous cases in the county during the past year.

The scientific program was presented by members of the society from Richmond. It consisted in a symposium on respiratory diseases, and was as follows:

Dr. E. R. Guinan read a paper on "Asthma in Children," stressing the important part played by idiosyncrasies of food in these cases.

Dr. W. E. Cunningham presented a paper on "Common Colds." It was pointed out that treatment of this condition had changed very little in modern times and that no specific therapy was found efficient except in a very limited number of cases.

Dr. J. F. Feldman spoke on the "Pathology of Pulmonary Tuberculosis" and gave practical applications showing the relationship between the clinical findings and the various pathological manifestations of the disease.

Discussion of these various papers was further participated in by the various members present. The meeting was followed by refreshments.

Those present were the following: J. W. Bumgarner, G. M. Bumgarner, H. Vestal, E. R. Guinan, J. F. Feldman, W. E. Cunningham, M. Deininger-Keser, Rosa Powell, all of Richmond; J. M. McCullough of Crockett, S. N. Weil of Selby. Visitors attending were C. O. Bishop, W. H. Young, Mrs. E. Redman, R. N., and Mrs. N. Purvience, R. N., all of Richmond.

S. N. WEIL, *Secretary Pro Tem.*



## FRESNO COUNTY

The regular meeting of the Fresno County Medical Society was held February 4, following dinner at the Fresno Hotel at 7 p. m. Forty members were present.

The minutes of the previous meeting were read and accepted.

The application for membership of F. J. Callahan of Madera and Ralph F. Blecker of 701 T. W. Patterson Building, Fresno, were read.

The following new members were elected: A. A. Arehart of Riverdale; Everett Morris of Auberry; Carl H. Shuck, Mattei Building, Fresno; Henry A. Randel, Griffith McKenzie Building, Fresno.

The board of governors recommended that the society authorize them to have the Welfare Committee, Dr. A. B. Cowan, chairman, confer with the Parent-Teacher's Association, with the view of having examinations for preschool children throughout the county. It was moved by Doctor Mitchell, seconded by Doctor Madden, that the recommendation of the board of governors be adopted.

The auditor's report was accepted.

Doctor Madden, chairman of Nomination Committee, moved that Dr. C. B. Collins be added to the list of delegates elected by the Fresno County Medical Society, Dr. C. M. Vanderburgh, alternate.

A letter was read from the district attorney that all the accident cases coming under Chapter 417, law in effect August 14, 1929, be reported immediately both by telephone and writing, to the police.

It was moved by Doctor Dau, seconded by Doctor Stein, that a committee be appointed to meet with the druggists to request that they do not refill prescriptions. The appointed are Doctor Dau (chairman), Doctor Stein, and Doctor Madden.

It was moved by Doctor Hare, seconded by Doctor James, that a committee be appointed by the chair to study hospitalization of people of moderate means.

Following is the committee appointed: Doctors Anderson (chairman), Dau, and James.

Dr. Robert W. Langley of Los Angeles presented the scientific paper of the evening, "Diagnosis and Treatment of Cardiac Pain."

J. M. FRAWLEY, *Secretary.*



## KERN COUNTY

On December 12 the Kern County Medical Society held its annual dinner dance at the Bakersfield Club. A large percentage of the members and wives were in attendance. An excellent dinner, fine orchestra music for the dance, combined with the usual good fellowship of the occasion, resulted in a most enjoyable evening. The committees responsible for the success of the party consisted of Doctors Jones, McKee and Fox, on arrangements; and Mesdames Smith, Gundry, Moore, Fox and Bahrenburg, on decorations.

The regular January meeting of the society was held at Taft on the evening of January 16, with the members of the West Side Medical Society acting as hosts. This annual event proved a great attraction, as the reputation of the West Side members is famous for the dinners they serve and the entertainment they provide. A sumptuous repast at the Petroleum Club House, to the strains of Hawaiian music from an orchestra, served to satisfy the gastronomic desires of the twenty members present, who were then introduced to Dr. William Duffield of Los Angeles, the speaker of the evening.

Doctor Duffield, in his usual extemporaneous and interesting way, spoke on the subjects of organization; the question of state medicine; hospital taxation; the recently organized Woman's Auxiliary; and many other legislative matters that are at present of vital interest to the medical fraternity of our state.

If we had more medical missionaries of the Duffield type who would bring subjects such as he gave to us before our meetings, our organizations, and each of us as individuals, would profit much from it.

We reluctantly allowed Doctor Duffield to end his talk to permit him to catch his train, but not until a rousing vote of thanks and appreciation was extended to him, and an invitation to come back again.

G. E. BAHRENBURG, *Secretary.*



## NAPA COUNTY

The regular monthly meeting of the Napa County Medical Society was held Wednesday, February 5, at the Ramona Gardens, Napa. A most delicious dinner preceded the business meeting.

The meeting was opened by Dr. George Dawson, president.

The minutes of the previous meeting were read and approved.

Communications were read and routine business transacted.

The secretary was authorized to pay for the printing of the regular meeting cards.

The committee appointed to make recommendations concerning malpractice suits was not ready to report.

A communication from Dr. C. E. Sisson, superintendent at Napa State Hospital, was read, inviting the Napa County Medical Society to hold its next regular meeting at the Napa State Hospital. The invitation was accepted.

The speaker of the evening, Dr. John Loutzenheiser of San Francisco, gave a most interesting discussion of "Anatomic Form and Its Relation to General Practice." His talk was illustrated with slides showing many typical cases of postural defect and the correction by properly fitting appliances. He stressed the importance of low-back pain and its relief by correct posture. An informal discussion of his subject followed.

The members present were: W. L. Blodgett, C. H. Bulson, H. R. Colman, G. I. Dawson, E. F. Donnolly,



C. A. Gregory, C. A. Johnson, D. H. Murray, L. Welti, G. J. Wood.

Edmund Butler of San Francisco, J. W. Green of Vallejo, C. E. Nixon of Napa State Hospital, and Loving, intern Napa State Hospital, were guests.

C. A. JOHNSON, *Secretary*.

#### ORANGE COUNTY

At the invitation of Dr. H. A. Johnston, the regular meeting of the Orange County Medical Society was held at Doctor Johnston's residence, 1401 South Los Angeles Street, Anaheim, on Tuesday, February 4, at 8 p. m.

Doctor Johnston gave us an interesting talk on "Surgical Clinics of Europe," and showed several reels of moving pictures. An exceptionally large attendance helped to make this meeting a success.

The business meeting was postponed for the evening with the exception of the first readings of three candidates: Robert S. Wade, E. D. Kilbourne, and H. MacVicker Smith. The appointment of a committee on membership and organization, in accordance with instructions from the state society, was made by President Robertson. This committee consisted of: J. L. Beebe, Anaheim; E. J. Steen, Fullerton; H. G. Huffman, Santa Ana.

Upon completion of the pictures, a delicious lunch was served by Mrs. Johnston.

A unanimous vote of thanks and appreciation was extended to Dr. and Mrs. Johnston for the evening's program and entertainment.

HARRY G. HUFFMAN, *Secretary*.

#### SAN BERNARDINO COUNTY

The regular meeting of the San Bernardino County Medical Society was held at the County Hospital in San Bernardino on February 4.

The meeting was called to order by the president at 8:10 o'clock, and the minutes of the previous meeting were read and approved.

There being no business before the house, the program of the evening was begun, an audience of sixty being present.

The following program was well received:

Motion picture of four reels—"Surgical Treatment of Peptic Ulcer," Davis & Geck, Inc. The discussion was limited to the time taken for changing the reels, and was given by Dr. Francis E. Clough of San Bernardino.

"The Medical Treatment of Peptic Ulcer" by Dr. F. A. Speik of Los Angeles followed. Discussion was opened by Dr. G. S. Landon of San Bernardino.

Supper was served following the scientific program.

E. J. EYTINGE, *Secretary*.

#### SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday evening at eight o'clock, February 6, in the Medico-Dental Club, 242 North Sutter Street, Stockton.

The meeting was called to order by Dr. Harry E. Kaplan, president. The minutes of the previous meeting and of a special meeting of the board of directors were read and approved.

A letter from Robert Couchman of the San Jose *Mercury-Herald*, with reference to the forming of a local health district, was read. An answer, written by Doctors Kaplan and Sippy, was read, and on motion of Dr. Dewey Powell, seconded and carried, the president was authorized to send this letter as expressing the attitude of the San Joaquin County Medical Society toward the San Joaquin local health district.

In compliance with a letter from the State Committee on Membership and Organization, the president turned the matter of new members over to the local Committee on Admissions, Doctor Conzelman, chairman.

There being no further business, Doctor Kaplan introduced Dr. Walter Coffey of San Francisco, who

spoke at length on the subject of "State Medicine and a Plan to Combat It."

Doctor Coffey said that the matter was brought up at the state convention at San Diego. In Los Angeles especially, it was shown that, due to the numerous free clinics, the younger physicians were finding it hard to get a start. Attention was called to the numerous articles on the high cost of sickness, too often written by people who knew very little about the subject. It is high time that the medical profession should step in to protect its own interests and find ways and means to deliver medical care to the middle class of our people before the matter is taken out of our hands by lay organizations.

The slogan should be changed from the "High Cost of Sickness," to the "Low Cost of Health."

In an attempt to solve the problem, Doctor Coffey has submitted a plan which is at present being studied by the Council of the California Medical Association.

In closing, the doctor stressed the fact that every effort should be made to preserve the individuality of the physician and permit the patient to choose his own doctor. In addition the public should be taught methods for the conservation of health.

The discussion was opened by Dr. John H. Graves of San Francisco, who said that while the method of monthly payments for medical and surgical service was very old, the unique thing about the plan proposed by Doctor Coffey, is for the organized medical society to control and direct the service and preserve the free choice to the beneficiaries to call their own physician, provided he be an associate member.

The doctor quoted numerous interesting statistics, all of which went to show that in the high cost of sickness, all things considered, the doctor's fee represents the least part of it all. He admonished those present to "Read a little and don't believe too much. Talk a little, but not too much. Think a great deal."

Dr. Langley Porter, dean of the University of California Medical School, next spoke on the subject. He said that if someone makes a great enough cry about something it is soon translated into a need and people seek legislation as a remedy. The present situation he regarded as a crisis in morals. The sense of responsibility of individuals for their own medical care is disappearing. The plan of Doctor Coffey is a tremendous advance to meet the situation.

The doctor took issue on only one point. He felt that there was much more involved than medical care when a person became ill, and for those numerous items he felt each beneficiary should be a member of a benevolent order which contracted with the medical profession for care of its members. He stated that only 20 per cent of the cost of medical care goes to the doctor. The benevolent order should administer the other 80 per cent.

The paper was further discussed by Doctors English, O'Donnell, Doughty, Chapman, De Lappe, Barton Powell, Hammond, Friedberger, Dozier, McGurk, and Dewey Powell. In closing, Doctor Coffey stated that he deeply appreciated the large amount of general discussion on the subject and hoped to see every county society develop as much interest. He felt that there was now too much lay organization drifting into the conduct of the doctor's business. He felt sure that there are enough splendid business men among the physicians to make an assured success of such an organization. He stated that the societies and hospitals controlled by medical men are the only ones which maintain a system of graduated charges to meet the needs of patients of variable ability to pay. He urged that the care of the sick be kept out of both politics and the hands of laymen. A patient is not property.

The meeting was well attended, there being eight visitors and thirty-eight members present as follows: Visitors—Doctors Walter Coffey, John H. Graves and daughter, Langley Porter of San Francisco, Fred R. De Lappe of Modesto, Sutton, Davenport, Messrs. Curtis and Ladd of Stockton. Members—Doctors



S. R. Arthur, Barnes, Blackmun, Blinn, Broadus, Buchanan, Chapman, Conzelmann, Dameron, Doughty, Dozier, English, Foard, Friedberger, Gallegos, Goodman, Hammond, Hanson, Holliger, Hull, Kaplan, Krout, La Berge, McCoskey, McGurk, Marnell, O'Donnell, Owens, Pinney, B. J. Powell, D. R. Powell, Powers, Priestley, Sanderson, Sheldon, Sippy, Smithers, and Williamson.

On motion of Dr. Dewey Powell the society adjourned with a rising vote in honor of the distinguished visitors of the evening.

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A special meeting of the San Joaquin County Medical Society Thursday evening, February 13, at 8:30 o'clock, in the Medico-Dental Club rooms, was called by the president to meet Dr. Edward H. Ochsner of Chicago, who delivered an illustrated paper on "Recent Fractures of the Hip."

In opening his paper the doctor first went carefully into the history of the methods found useful up to date, of which the two outstanding ones were that of Whitman and of Maxwell and Root. The earlier methods had proved inefficient in so many cases that as late as 1921 Galloway admonished the profession to treat the patient and let the fracture alone.

The Whitman method, while giving excellent results in most cases, required a very long period of treatment with the patient immobilized. This was a serious consideration in the matter of aged patients. The Maxwell-Root method permits the patient to rest in a semi-upright position, with some motion at the knee, and the limb can be used in two to three months, as compared to six to twelve months in the other.

In comparing the details, the doctor stated that x-ray pictures show that with the Maxwell-Root method there is less distortion of the bone trabeculae in the reunion of the fragments, and that is the reason there is an early function of the limb.

The method was first described in 1870 by F. J. Maxwell and later improved by Root of Iowa. Doctor Ochsner has used it since 1900 with much satisfaction. The procedure is described as follows: The patient is anesthetized either with ether or morphin; the femur is brought to a vertical position followed by outward traction and the limb lowered to the horizontal. Now a Buck's extension is rigged with weight approximating one-thirteenth that of the patient. In addition, the patient lies in a semi-reclining position and a broad strip of adhesive seven inches wide passing spirally about three-quarters the way around the thigh from below upward and from the outer aspect over and under, the end attached to a cord which in turn passes over a pulley and supports a weight sufficient to correct the tendency to eversion. The foot of the bed is supported on twelve-inch blocks. The leg is supported on a pillow, leaving the heel free and the sole of the foot vertical. After seven to ten days it is safe to permit gentle flexion of the knee. In this manner the patient is confined to bed for two to three months and then, with a light cast from the umbilicus to the knee and a high sole on the normal limb, he is allowed to be up on crutches.

The method is recommended because it is universal in its application and simple to apply. It is attended with reduced morbidity and mortality and fewer failures. Here the doctor cited case histories and statistics to prove his assertions.

The paper provoked considerable discussion, led by Doctor Sanderson and followed by Doctors Chapman, Hammond, Hench, Dameron, and Kaplan.

In answer to questions, Doctor Ochsner closed the discussion by saying that he did not reduce an impacted fracture if the angle was anywhere near correct; this angle is determined by the x-ray picture; and the blood supply as a source of success or failure is usually of little concern because the nutrient artery of the femur has never been shown to be involved in arteriosclerosis. Syphilis is a real hindrance to union.

Mr. J. W. Davidson, special agent for the Board of Medical Examiners, was introduced and spent some

time in explaining some of the points of the amended Medical Practice Act of 1929.

There being no further business the meeting was adjourned.

Those present were: Drs. Barnes, Blackmun, Blinn, Broadus, Chapman, Conzelmann, Dameron, English, Frost, Gallegos, Hammond, Hench, Hull, Kaplan, LaBerge, Lynch, McCoskey, McGurk, O'Connor, O'Donnell, Peterson, Pinney, B. J. Powell, Priestley, Sanderson, Sheldon, Sippy, Van Meter, and Vischi. The following visitors attended: Drs. Sutton, Sherrill, and Vanderleek.

C. A. BROADUS, *Secretary*.

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#### SANTA BARBARA COUNTY

The annual banquet meeting of the Santa Barbara County Medical Society was held at the University Club on Monday evening, January 13, with President N. H. Brush presiding.

The minutes of the previous annual meeting were read and approved.

At the commencement of the dinner Doctor Wills introduced Frank Greenough's string ensemble, who entertained with wonderful music during the dinner hour. Also, during that time, the Revelettes—three girls from the State Teachers College—gave several songs, which were enthusiastically received.

Doctor Brush then called upon Doctor Franklin, a recent member, for a few remarks. Doctor Soper, the honorary member of the society, also made a few remarks.

The president then introduced the speaker of the evening, Mr. Max Horwinski of Oakland, who was scheduled on the program as a German professor from the University of Wurtzburg, and who gave a most humorous and interesting talk on the origin of music.

Doctors Ussher, Wilcox, and Shelton were then unanimously elected into membership in the society.

Doctor Brown moved that balloting for officers be made by acclamation, and after some discussion this was declared unconstitutional.

The following officers were then elected for the ensuing year:

Hugh Freidell, president; Henry Ullmann, vice-president; W. H. Eaton, secretary-treasurer; O. C. Jones of Santa Maria and H. G. Hanze of Solvang, vice-presidents-at-large. Delegates for two years, Henry Ullmann and Hugh Freidell. Alternates, Drs. Mellinger and Eaton. Board of censors, Drs. Johnson, Thorner, and Means.

There were present at the meeting forty-six members and fourteen visitors.

There being no further business the meeting adjourned.

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The regular meeting of the Santa Barbara County Medical Society was held in the nurses' home at the Cottage Hospital on Monday evening, February 10, with President Freidell in the chair.

The minutes of the previous meeting were read and approved.

A communication from the State Association regarding the membership drive was read. The State Association is very desirous of getting every eligible practicing physician in the community as a member. The secretary reported that every man, to his knowledge, who was eligible was already a member, and it was moved, seconded, and carried that he report same to the State Association.

A communication from Mrs. Henry Rogers of Petaluma regarding the formation of a Woman's Auxiliary to the County Medical Society was read, and upon motion by Doctor Stevens, duly seconded and carried, the president appointed a committee to form such an auxiliary consisting of Doctors Mellinger and Bakewell.

The time of meeting was discussed, and it was the consensus of opinion that 8:30 was too late, and also it was a violation of the county society constitution.



Therefore in the future all meetings will be commenced promptly at eight o'clock.

The president desired that either a copy or an abstract of every paper presented to the society be given to the secretary for filing and future reference.

The secretary again announced the appointees on the board of censors, consisting of Doctors Johnson, Thorner, and Means; and Program Committee, consisting of Doctors Freidell, Henderson, and Eaton.

The scientific program was opened by Dr. Ussher, who gave a paper on "Bronchial Asthma Without Evidence of Protein Sensitivity." This was discussed by Doctors Henderson, Stevens, and Atsatt.

Doctor Geyman then followed with a talk on "Diverticulæ of Duodenum and Stomach," illustrated by lantern slides. This was discussed by Doctor Freidell.

Both of these papers were extremely interesting and were enthusiastically received.

There being no further business the meeting adjourned.

W. H. EATON, *Secretary*.

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#### SANTA CRUZ COUNTY

The February meeting of the Santa Cruz County Medical Society was held February 20, at Alexander's, Boulder Creek. After a most enjoyable dinner the meeting was turned over to Dr. Leo Eloesser of San Francisco, speaker of the evening. The paper dealt with pulmonary diseases, especially abscess and bronchiectasis, from a surgical standpoint. Etiology, symptomatology, diagnosis, and various types of therapy were discussed and illustrated with suitable lantern slides. A general discussion followed.

Dr. F. P. Shenk, eye, ear, nose and throat specialist, now located in Santa Cruz, was admitted to membership in the society. The resignation of Dr. T. F. Conroy, who has retired from practice, was accepted.

The following members of the society were present: Doctors Bettencourt, Congdon, Dowling, Harrington, Eiskamp, Fehlman, Atwood, Marshall, A. L. Phillips, Piper, Randall, and Shenk.

S. B. RANDALL, *Secretary*.

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#### STANISLAUS COUNTY

The regular monthly meeting of the Stanislaus County Medical Society on Friday, February 14, was called to order by President Hiatt.

The minutes of the previous meeting were read and approved.

A Committee on Membership and Organization was appointed by Doctor Hiatt, including Doctor Hartman, chairman, and Doctors Allen and Pierson. A discussion of doctors who did not belong to the county society revealed that only two eligible doctors were not members. It was decided that an attempt be made to get these two to join the society.

Doctor Hiatt announced that on April 11 the society would have ladies' night, and the program would consist of moving pictures and interesting case reports by members of the society.

Dr. Charles A. Lunsford of Oakland gave a very interesting lecture on the subject "Epidermophytosis," illustrated with slides.

DONALD L. ROBERTSON, *Secretary*.

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#### VENTURA COUNTY

The February meeting of the Ventura County Medical Society was held in the new offices of Dr. D. G. Clark and Dr. William Felberbaum in Santa Paula, Tuesday evening, February 18. President D. G. Clark opened the meeting.

Members present were: Doctors Wright, Schultz, Bianchi, W. S. Clark, Tillim, Armitstead, Illick, Yoakum, Felberbaum, Hendricks, Manning, Osborn, Shore, Smolt, Achenbach, Bardill, Welsh, and Johnson.

The minutes were read and approved.

A letter from the state secretary requesting names of delegate and alternate elected for two years was read. Moved and carried that Doctor Achenbach, having served last year as delegate, be elected for one year more, and that Doctor Bardill be elected alternate for two years.

Moved and seconded that the secretary be instructed to write state senator and representative protesting against proposed change in prohibition regulations. Carried.

The program for the evening consisted of an informal lecture, given by Dr. Samuel Robinson of Santa Barbara. His subject was "Malignant Tumors of the Lower Bowel." Points in diagnosis were briefly touched upon, and then a comprehensive description of the surgical technique of removal of these tumors was presented.

At the close of Doctor Robinson's paper the meeting was adjourned. Refreshments were served by Doctors Clark and Felberbaum.

CHARLES A. SMOLT, *Secretary*.

### CHANGES IN MEMBERSHIP

#### New Members

*Alameda County*—Judith Ahlem, Edward Purcell, Brooks P. Stephens.

*Fresno County*—Kenneth D. Luechauer.

*Lassen-Plumas County*—William R. Harder.

#### Los Angeles County

Clarence E. Bird	Lawrence W. Smith
LeRoy Crummer	John M. Spaulding
Delmer L. Davis	Carl I. Sulzbacher
Edward C. Donohoe	Roy N. Taylor
Albert F. Heimlich	Elwyn E. Terrill
Herbert A. Judson	M. G. Varian
Romeo J. Lajoie	M. Russell Wilcox
Verne M. Mantle	Leon Wolff
Samuel S. Mathews	F. LeGrand Noyes
Cyrus W. Poley	James M. Odell
John H. Rindlaub	Arthur N. Nelson
David H. Rosenblum	Franklyn Thorpe
Joseph Sandie	Elroy F. Sheldon
Benjamin Harry Sherman	J. Dickson Oyler
Edward A. Skaletar	Donald G. Bussey

*Monterey County*—Horace L. Dormody, Hugh F. Dormody.

*Orange County*—Richard C. Cochran, Clarence Anson Neighbors.

*San Francisco County*—Roger U. Campbell, Kaho Daily, Francisco L. A. Gonzales, Keene O. Haldeman, J. Laverne Laughton, Ruth A. Nethercut, S. D. Patek, John F. Quinlan.

*Santa Barbara County*—E. K. Shelton, N. T. Ussher, A. B. Wilcox, Albert J. Holzman, Marthe Cresson.

#### Transferred Members

Ernest Eric Larson, from Yolo to Los Angeles County.

Charles E. Sisson, from Mendocino to Napa County.  
Mast Wolfsohn, from San Francisco to San Mateo County.

Norbert J. Gottbrath, from San Francisco to Santa Clara County.

Leonard W. Ely, from San Francisco to Santa Clara County.

#### Resignations

Warren H. Slabaugh, Los Angeles County.

Gilbert Van Vranken, Los Angeles County.

Louis L. Sherman, Alameda County.

Jessie B. Farrior, Alameda County.

Arthur Wegeforth, San Diego County.

Joseph Van Becelaere, San Diego County.

#### Deaths

**Barsotti, Camillo.** Died at San Francisco, February 1, 1930, age 67 years. Graduate of Royal University of Florence Faculty of Medicine and Surgery, Florence, Italy, 1887. Licensed in California, 1892. Doctor Barsotti was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Scholl, Marguerite Julia.** Died at Los Angeles, January 17, 1930, age 36 years. Graduate of University of Southern California School of Medicine, Los Angeles, 1921. Licensed in California, 1921. Doctor Scholl was a member of the Los Angeles County



Medical Association, the California Medical Association, and the American Medical Association.

### OBITUARY

Walter Watkins Davis  
1879-1930

On February 1, 1930, at 7:30 p. m., Walter Watkins Davis passed away at his residence in Brea, California. Death was the result of pneumonia.

Doctor Davis was born in Pittsburgh, Pennsylvania, June 13, 1879; son of William P. and Deborah Watkins Davis. He was educated at Pittsburgh high school; Western Pennsylvania College (now University of Pittsburgh) medical department, M. D. 1903; interned at Reinemon Maternity Hospital, Pittsburgh, 1903. Following this, Doctor Davis engaged in a general practice at Pittsburgh, Pennsylvania, and Imperial, Pennsylvania, until 1912, when he removed to Anaheim, California. In Anaheim he was associated with the Johnston-Beebe-Clark Sanatorium as bacteriologist for two years. He located in Brea in 1914.

During the war, Doctor Davis served as a commissioned first lieutenant at Camp Lewis, Washington, then was sent overseas with Base Hospital 93, serving in Mont Dore, France, and Coblenz and Newied, Germany. He was discharged at Camp Dix, New Jersey, July 9, 1919, after thirteen months of active service. Immediately after his discharge from the service he returned to Brea and resumed his extensive practice.

Doctor Davis married Florence Grewco of Pittsburgh, June 6, 1906. She and one son, David William, survive him.

He was an Episcopalian, member of the American Legion, a Pythian Knight, a Republican, member of the Orange County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Doctor Davis was only fifty years old at the time of his death, but as a practitioner he had a large following and was loved and respected by his confrères.

### THE WOMAN'S AUXILIARY OF THE CALIFORNIA MEDICAL ASSOCIATION\*

#### OFFICIAL NOTICE

Secretaries of all county auxiliaries are requested to furnish a list of officers and members to the State Auxiliary secretary, Mrs. R. A. Cushman, 632 North Broadway, Santa Ana, Orange County, at least *thirty days* before the annual session at Del Monte on April 28 to May 1, in order that the state secretary may send in her report to the national secretary at the yearly session of the American Medical Association at Detroit, June 23 to 27.

The following counties are in the honor roll of auxiliary activities, and should each be represented at the Del Monte session by properly qualified delegates and alternates:

Contra Costa County—Mrs. J. M. McCullough, president.

Kern County—Mrs. F. A. Hamlin, president.

Los Angeles County—Mrs. J. F. Percy, president.

Orange County—Mrs. F. E. Coulter, president.

San Bernardino County—Mrs. H. E. Clough, president.

Sonoma County—Mrs. J. Leslie Spear, president.

JEAN F. ROGERS, *President*.

#### LOS ANGELES COUNTY

**Organization Meeting of the Los Angeles County Woman's Auxiliary.**—Dr. William Duffield called to order the preliminary meeting of the Los Angeles

\* As county auxiliaries to the Woman's Auxiliary of the California Medical Association are formed, the names of officers should be forwarded to the state secretary-treasurer, Mrs. R. A. Cushman, 632 North Broadway, Santa Ana, and to the California Medical Association office, Room 2004, 450 Sutter Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed for publication in this column. See advertising page 6 of each issue for state and county officers.

County Woman's Auxiliary at 2:15 p. m., Friday, December 27, 1929, in Room 412, Union Insurance Building.

After presentation of a brief history of the Woman's Auxiliary movement, Doctor Duffield retired and Mrs. James F. Percy took the chair.

Mrs. Martin G. Carter was elected chairman *pro tem*. The secretary then read the official call for this meeting and the underlying principles that govern the formation and regulation of the Woman's Auxiliary of the Los Angeles County Medical Association.

On motion of Mrs. Piness, duly seconded and carried, it was ordered that a Woman's Auxiliary of the Los Angeles Medical Association be formed.

On motion of Mrs. Pierce, duly seconded and carried, it was resolved that the by-laws, as read, be adopted.

Dues of the following charter members were then received: Mesdames F. S. Balyeat, Walter Bliss, J. H. Breyer, Martin C. Carter, John F. Chapman, Edgar F. Craft, Kenneth L. Davis, William Duffield, George G. Hunter, W. H. Kiger, E. M. Palette, William B. Parker, James F. Percy, Clarence W. Pierce, George Piness, Rea Smith, H. B. Tebbetts, W. E. Waddell, and Chalmer Hiram Weaver.

On motion of Mrs. Hunter, duly seconded and carried, the chairman appointed Mesdames William Duffield, chairman; E. M. Palette and H. B. Tebbetts as a committee on nomination of permanent officers.

After a ten-minute recess, the chairman of the Nominating Committee submitted the following names:

Mrs. James F. Percy, president; Mrs. P. S. Doane, first vice-president; Mrs. B. Von Wedelstaedt, second vice-president; Mrs. Martin G. Carter, secretary-treasurer.

On motions duly made and seconded and carried, the report of the Nominating Committee was accepted and officers as named were declared elected; dues of the local society were established as \$1 a year; the president was instructed to arrange for a joint meeting of the auxiliary and the Los Angeles County Medical Society, provided that Doctor Fishbein would talk on the Woman's Auxiliary, and the privilege of enrollment as charter members was extended until after the February meeting.

There being no further business, on motion duly made and seconded, the meeting adjourned.

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**Executive Board Meeting of the Woman's Auxiliary of the Los Angeles County Medical Society.**—Mrs. James F. Percy called the meeting to order at 11:45 a. m., January 16 at the home of Mrs. Martin G. Carter, 3930 Ingraham Street, Los Angeles.

The president reported that Mrs. Edgerton Cripin had been appointed membership chairman. After the arrival of Mrs. P. Doane, a recess was called for luncheon.

The meeting reconvened at 1:20 p. m. and on motion of Mrs. Doane, seconded by Mrs. Von Wedelstaedt, the following standing rules were adopted:

1. All matters of business which members desire to bring before the Association shall first be presented to the board of directors for action. If not approved by the board, upon petition presented to the board, and signed by one hundred members of the Association in good standing, such business must be brought before the Association for action.

2. There shall be the following standing committees: Program, Membership Credentials, Hospitality, Hostess, and Ways and Means.

3. The Program Committee shall consist of three members together with the president of the Association who shall be chairman of the committee.

4. Admission to all meetings shall be by card of current year only.

5. A check for dues must accompany all application for membership.

6. No appeals for financial aid shall be made from the platform or in the Association room except by



permission of the Executive Committee, nor shall there be any personal canvass of funds.

7. Members may bring guests to all regular programs by paying fifty cents.

On motion of Mrs. Carter, seconded by Mrs. Doane and carried, the payment of bills amounting to \$1.95 was authorized.

On motion of Mrs. Von Wedelstaedt, duly seconded and carried, the president was authorized to have membership cards and notices of the February meeting printed.

On motion of Mrs. Doane, duly seconded and carried, meetings were set for 2:30 p. m. on the third Thursday of alternate months.

The minutes were read and approved and the meeting adjourned.

(Mrs.) MARTIN G. CARTER,  
*Secretary-Treasurer.*

NEWS

The Woman's Auxiliary of the Los Angeles County Medical Association gave a luncheon at the Women's Athletic Club, 833 Flower Street at one o'clock, Monday, January 6.

The president introduced Mrs. Ruggles Cushman, secretary of the State Auxiliary, and Mrs. Morris Fishbein of Chicago.

Dr. Morris Fishbein gave a talk on "The Woman's Auxiliary Movement."

The following signed as additional charter members: Mesdames Eliot Alden, H. D. Barnard, John Barrow, C. H. Bishop, H. R. Boyer, Harry V. Brown, Arnold Burkleman, Arthur Cecil, Edgerton Cripin, P. Doan, Roy Hammack, Samuel Ingham, Simon Jesberg, D. N. Jones, E. D. Kremers, Edmund L. Lazard, E. R. Lewis, T. Lyster, H. A. MacArthur, W. H. Mayne, H. F. Markolf, Harry G. Marxmiller, W. T. MacArthur, E. F. Nippert, John Nuttall, H. Olds, Oscar Reiss, Henry Rooney, H. E. Schiffbauer, H. Snure, Philip Stephens, J. E. Walker, B. Von Wedelstaedt, Ed H. Williams, Neal N. Wood, W. B. Wright, Jr., and A. H. Zeiler.

NEVADA STATE MEDICAL ASSOCIATION

W. A. SHAW.....	President
R. P. ROANTREE, Elko.....	President-Elect
H. W. SAWYER, Fallon.....	First Vice-President
E. E. HAMER, Carson City.....	Second Vice-President
HORACE J. BROWN.....	Secretary-Treasurer
R. P. ROANTREE, D. A. TURNER, S. K. MORRISON.....	Trustees

COMPONENT COUNTY SOCIETIES

NEVADA STATE MEETING

The annual meeting at Elko was a great success and all those who did not attend deprived themselves of lots of valuable instruction, as the program was first class in every particular. W. A. Shaw of Elko took his seat as president, and the following officers were elected: R. P. Roantree, Elko, president-elect; H. W. Sawyer, Fallon, first vice-president; E. E. Hamer, Carson City, second vice-president; D. A. Turner, Reno, trustee for three years; Horace J. Brown, secretary-treasurer.

The president has made the following committee appointments for the year:

Membership—A. C. Olmsted, P. De McLeod, W. H. Frolich.

Judicial—A. J. Hood, Elko; R. A. Bowdle, R. R. Craig, W. L. Howell, C. W. West, V. A. Muller.

Scientific Work and Program—M. A. Robison, E. L. Creveling, H. A. Paradis.

Necrology—E. E. Hamer, J. E. Worden, G. W. Green.

Entertainment—S. K. Morrison, D. A. Turner, W. L. Samuels.

Public Health and Education—M. R. Walker, W. A. Shaw, Mary H. Fulstone.

Military Affairs—T. W. Bath, C. E. Secor, W. A. Shaw, and Secretary.

Council—H. W. Sawyer, W. L. Howell, J. C. Cherry, C. E. Swezy, J. H. Hastings, D. A. Smith, L. P. Monson, Hal L. Hewetson, A. J. Hood, Elko; J. T. Rees, F. M. West, A. B. DeChene, M. J. Rand.

The president wishes to state that he and the secretary are willing and glad at all times to coöperate with any of the committees in more adequately fulfilling their duties during the year.

Do not forget that dues are now due and that you should send to the secretary \$10, for which he will send you a membership card and twelve issues of CALIFORNIA AND WESTERN MEDICINE. Members should bear in mind that this has nothing to do with the county society dues, which should be paid to their local secretary. Several of the Washoe County members were confused last year not knowing that the dues of both the county society and state association were raised, and only paid the \$5 dues to the county society. This left them without recognition, so far as the state association and the American Medical Association were concerned. We hope that no one will be confused on this point this year.



ELKO COUNTY

All the news we have is the annual meeting of the Elko County Medical Society, which was held at Elko January 14, at which time the following officers were elected for 1930: R. P. Roantree, president; W. A. Shaw, vice-president; John E. Worden, secretary-treasurer; C. W. Eastman, trustee.

After the business meeting, all present enjoyed a social dinner together at Sherell's Café.



WASHOE COUNTY

The regular monthly meeting of the Washoe County Medical Society was held on the evening of February 11 at the Reno City Hall. President E. E. Hamer, secretary of the Nevada State Board of Medical Examiners and president of the society, presided.

The program feature of the evening varied at the beginning by having a first-aid feature demonstration by members of the local Bell Telephone Company, led by Mr. A. E. Bodle of Bell Telephone employ. The demonstration was treatment of a hypothetical case of fracture of the skull with arterial bleeding from cut over the eye, electric burn of the right hand, and a compound fracture of the right leg at ankle-joint received by a lineman in a fall from a pole. The first-aid class gave artificial respiration, bandaged the head, sterilized the wounded hand and leg, bound the hand, and immobilized the injured leg with splints which bound the injured leg to the well one. The operation was scientifically completed in seventeen minutes.

During the demonstration the physicians looked on and enjoyed the systematic methods in which these young men worked and their apparent ease which was the result of experience and practice. They were heartily cheered and commended for the excellency of their demonstration. Men like these and like the Boy Scouts, available for emergencies, are a public benefit in any community.

The medical papers for the evening were in the nature of presentation of cases of skull and brain injuries, led by Dr. Donald Maclean and followed by Dr. Horace J. Brown. Doctor Maclean gave a history of six private cases. The synopses of four are here given.

Case 1. Japanese laborer. Injury produced by dynamite blast, piece of rock the size of a head striking victim on top of head, splitting skull in two and laying wide open both hemispheres. No rock or bone found in brain. Very little hemorrhage. Patient perfectly conscious, but could not see. Pupils equal but dilated. Pulse 60, but shortly dropped to 40 or less. Wound was one and one-half inches wide by four

inches long. Skull completely gone from wound area. Membranes torn, hemispheres widely separated, heart beat seen registering in the brain. No pain, but totally blind, with ringing of the ears. No operative procedure done. Ate normally, secretions normal for two days. Night of second day, temperature was 105 degrees F., moribund, died at five o'clock.

Case 2. Prizefighter, who became "punch drunk" in encounter. Then became quartz miner. Considered "not there" mentally by friends. Was shot by forty-five caliber Colt for petty theft. Bullet struck top of head, tearing skull off completely to frontal eminence. Ran 250 yards and hid for two hours after shot. Was semiconscious when found. Examination showed no apparent brain injury, although membranes were torn. Pulse was about 100. Developed acute meningitis, with temperature of 106 degrees F. Died on third day.

Case 3. November 30, 1915, 21-year-old boy was kicked by horse. Both feet of the animal struck boy over left parietal. He was seen almost immediately by doctor. Boy was unconscious, pulse 30, respiration slow and stertorous, parietal bone fractured in many places. Fracture extended over vault down to parieto-occipital junction, right side. Decompression done. Restoration of fragments of bone to as nearly normal contour as possible. In operation, dura found intact and was left so. Unconscious eleven days. After that there was a gradual return to consciousness. Began to work on April 1, 1916. May, 1920, attacks of dizziness and could not maintain his balance. He was taken to Stanford Hospital. There spinal puncture was done with no result. Then brain was needled through area of fracture. Several ounces of fluid were drained off. Dizziness relieved for several days, but July 29 became paralyzed and completely deaf in right ear. August 9, occipital decompression was done, with relief of all symptoms, but leaving patient with paralysis of pharynx. August 17, operation was done for removal of tumor of cerebellum. Died on August 19. Diagnosis was sarcoma of cerebellum.

Case 4. Auto accident on night of August 16, 1929. Five boys in a Ford coupe smashed into pine tree with sufficient force to snap tree off thirty feet above ground. One boy was killed instantly, one died shortly after. Two others escaped with practically no injuries. Patient here described had a terrific concussion, scalp wound over left parietal, tear over left ear, and excoriation of left side of neck. Unconscious when brought to hospital few hours after injury. Eyes reacted normally. Apparent paralysis of left arm and leg, with Babinski of left leg and ankle clonus of same. Right side normal. X-ray negative for fracture of skull. Diagnosis was concussion, with paralysis of right arm and right leg due to contrecoup. Pulse dropped to 50. Temperature was 102 degrees F. Antitetanic serum given, with result that temperature rose to 105 degrees and 107 degrees. Eighteen days after accident, subtemporal decompression was done. Bulging of dura was opened and considerable yellow fluid evacuated. Wound closed with drain in dura which was removed in forty-eight hours. Unconscious twenty-six days. Consciousness returned slowly. Urine voided involuntarily; bowels by enema. After recovering consciousness, paralysis of arm and leg gradually subsided. Home on October 6. Recovery practically complete except for slight limp in left leg.

Doctor Brown followed Doctor Maclean with extemporaneous citing of instances of brain injuries which brought out the value of blood pressure readings to determine the progress of the brain hemorrhage. There were running comments on brain cases seen in the World War by those who had served overseas in the great conflict.

The meeting concluded with a satisfied feeling by all present that it was an hour well spent in the dis-

cussion of a type of case which calls for experienced judgment of highest type.

THOMAS W. BATH, *Secretary*.

#### NEVADA NEWS

On December 10, at the Elko General Hospital, the following members of the staff were elected as officers for 1930: John E. Worden, chief of staff; W. A. Shaw, vice; W. A. Haas, secretary.

## UTAH STATE MEDICAL ASSOCIATION

H. P. KIRTLEY, Salt Lake City.....President  
WILLIAM L. RICH, Salt Lake City.....President-Elect  
M. M. CRITCHLOW, Salt Lake City.....Secretary  
J. U. GIESY, 701 Medical Arts Building,  
Salt Lake City.....Associate Editor for Utah

### COMPONENT COUNTY SOCIETIES

#### SALT LAKE COUNTY

The regular meeting date of January 13 was changed to January 10 in order that a banquet could be held for Dr. Morris Fishbein of Chicago, editor of *The Journal of the American Medical Association*.

The meeting was called to order at 8:30 p. m. by President M. M. Nielson, who introduced the speaker of the evening. Seventy-eight members and ten visitors were present.

Doctor Fishbein gave a very interesting talk upon the "Cost of Medical Care."

President Nielson announced at the close of the talk that Doctor Fishbein would give a public lecture, under the auspices of the B'Nai Brith Forum, at the Assembly Hall on January 11, at 8:15 p. m. The subject of the talk was "Fads and Quackery."

The meeting was adjourned at 9:40 o'clock.

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The regular meeting of the Salt Lake County Medical Society, held at the Holy Cross Hospital Monday evening, January 27, was called to order by President M. M. Nielson at 8:05 o'clock. Forty-eight members and eight visitors were present.

The minutes of the meeting of December 9 were read and, after correction by Doctor Pace, accepted. The minutes of the meeting of January 10 were read and accepted without correction.

The clinical meeting was then turned over to L. N. Ossman. The program was as follows:

The Diagnosis of Antrum Disease—T. F. Welsh.

Case of Duodenal Ulcer and a Case of Appendicitis—A. J. Hosmer.

The Use of Horse Serum in the Treatment of Burns, Case Report—S. G. Kahn.

A Case of Patent Urachus—G. N. Curtis.

Hypernephroma—W. G. Schulte.

Empyema—T. W. Stevenson.

Cholecystography—J. P. Kerby.

These papers were discussed by C. L. Sandberg, J. A. Phipps, F. Leaver Stauffer, and B. Coray.

J. Z. Brown reported for the Committee on Selection of a Meeting Place. J. P. Kerby moved that the society continue to meet at the Newhouse Hotel. Motion seconded and carried.

The meeting adjourned at 9:45 o'clock.

BARNET E. BONAR, *Secretary*.

#### UTAH NEWS

The regular weekly meetings of the Academy of Medicine, held Thursdays, have continued since last report. On the several dates specified below the following programs were presented:

January 16—Recent Findings in Etiology of Influenza, L. L. Daynes. Polyposis Gastrica, George Middleton.



January 23—Thrombo-Angiitis Obliterans, H. T. Anderson. Medical Notes from San Francisco, E. L. Viko. Subphrenic Abscess, L. A. Stevenson.

January 30—Schilling Index, T. A. Flood. Talk on Pneumothorax, Doctor Van Scoyoc.

February 6—Addison's Disease, Doctor Skofield. Surgical Treatment of General Peritonitis, Doctor Young. Prevention of Postoperative Emboli, Dr. F. Hatch.

\* \* \*

One of the outstanding events of the professional world during the past month was the joint banquet of the Salt Lake Dental and Salt Lake County Medical Societies. The Salt Lake County Dental Society as hosts entertained the doctors at the Elks' Club on the night of Friday, February 7.

Some two hundred members of both societies attended. During and following the dinner, entertainment was staged in the form of vocal numbers, adagio dancing, and a one-act playlet of comedy type. Addresses were made by Doctor Irvine and Doctor Wherry, and a response by Dr. M. M. Nielson rounded out the evening, which came to an enthusiastic close about nine o'clock.

The Salt Lake County Medical Society desires to express its sincere appreciation of the feeling of good fellowship and coöperation which lies back of this very pleasant occasion. Similar functions have occurred in the past, and have contributed much to the spirit of good fellowship between the two professional groups.

\* \* \*

The regular meeting of the Salt Lake County Medical Society was held at the Salt Lake County Hospital on Monday, February 10.

The meeting was called to order at 8:10 p. m. by President M. M. Nielson. Thirty-two members and fourteen visitors were present.

The minutes of the previous meeting were read and accepted without correction.

The clinical program was then turned over to Clark Young. The following papers were presented:

Arthroplasty of Knee—Interesting Fractures, R. J. Alexander; Differential Diagnosis of Heart Murmurs, Ralph Tandowsky; Spinal Fusion (Hibbs') Operation for Pott's Disease, L. C. Snow; Gastric Carcinoma, Richard Baylor; Rhinorrhea—Spinal Fluid, W. H. Rothwell; Clinical Report of Forty-Five Cases of Spinal Anesthesia, R. D. Smith (by invitation); Conservative Treatment of Abortion, Ray T. Woolsey; Duodenal Ulcer, Frank H. Low (by invitation); Musculospiral Paralysis—Unknown Origin, R. O. Johnson.

\* \* \*

The following report of the Necrology Committee was made:

In Memorium—E. G. Gowans

Whereas, Our comrade, Dr. E. G. Gowans, who has for so long been an admired and respected member of our profession, our society, and an honored citizen of the state, has been taken from us by the summons of a Power greater than ours; and

Whereas, We feel his loss and a deep sympathy for the loss of those who loved him in a more intimate way; therefore be it

Resolved: That the Salt Lake Medical Society officially recognize the death of Doctor Gowans by spreading a copy of this resolution upon the minutes of the society as a permanent record, and by forwarding a copy of the same to the family of the deceased as an attest of that regret which is ours as well as theirs.

J. Z. Brown moved that the report of the Necrology Committee be accepted and filed. Motion seconded and carried.

\* \* \*

A report of the committee regarding a communication from the Salt Lake General Hospital asking for the sentiment of this society in respect to professional cards being allowed in the year-book of this institution was made. It was the sense of the committee

that names of the doctors who would contribute to the magazine fund be printed in one page of the advertising section of that magazine. J. P. Kerby moved that the report be accepted. Seconded and carried.

The report of the board of censors on the application of J. M. Schaffer was to the effect that the applicant be notified to apply to the nearest component society of the Utah State Medical Association.

The applications of Maurice Gordon and J. R. Wherritt were read and given to the board of censors for investigation.

The applications of Mildred Nelson and Orin Ogilvie were favorably reported upon by the board of censors, and both were unanimously elected members of the society.

F. M. McHugh took the chair and announced that on February 24 there would be a dinner meeting at the Newhouse Hotel at 7 p. m.

The meeting was adjourned at 10 p. m.

BARNET E. BONAR, *Secretary*.

## OBITUARY

Ephraim G. Gowans

1868-1930

Dr. Ephraim G. Gowans had for many years been prominently known as an educator, jurist, and physician. He was born in Tooele, Utah, February 1, 1868, the son of Hugh S., and Betsy Gowans, who came to Utah from Scotland in 1855. He received his early education in the county schools and later studied at the Brigham Young Normal School in Provo, graduating in 1891. Doctor Gowans married Mary Lyman shortly afterward and then took a bachelor of science degree from Brigham Young College at Logan. He graduated in medicine from the Baltimore Medical College and later took a postgraduate course at Johns Hopkins. For a time he practiced his profession in Springville, but later removed to Salt Lake. In 1907 Doctor Gowans was appointed judge of the Juvenile Court, holding the post until 1909. In 1909 he was appointed superintendent of the State Industrial School in which office he continued until 1915. At the close of his term as industrial school superintendent he served four years as superintendent of public instruction and then for two years as director of health, retiring from the latter position in 1921.

As an educator he was at different times instructor at Brigham Young College, Brigham Young University, and the University of Utah from which latter position ill health compelled his retirement in 1929. He was a former member of the Bonneville and Exchange Clubs, the Deseret Sunday school general board, and the Ensign Club. Doctor Gowans died Wednesday, February 5, 1930. He is survived by his widow, a son, three daughters, a sister, and three brothers.

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Eulogy of the Doctor.—There are men and classes of men that stand above the common herd—the soldier, the sailor, the shepherd not infrequently, the artist rarely, rarer still the clergyman, the physician almost as a rule. He is the flower of our civilization and when that stage of man is done with, only to be marveled at in history, he will be thought to have shared but little in the defects of the period and to have most notably exhibited the virtues of the race. Generosity he has, such as is possible only to those who practice an art and never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sickroom and often enough, though not so often as he desires, brings healing.—*Robert Louis Stevenson*.

## MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

### NEWS

**California Tuberculosis Association Meeting.**—The annual meeting of the California Tuberculosis Association will be held in Merced on April 7 and 8, with headquarters at the Tioga Hotel. Those interested are cordially invited to attend.

The regular annual business meeting will be held on April 7, and on the evening of that day there will be a dinner at the hotel, followed by an address by Dr. J. W. Mountin of the United States Public Health Service on "Tendencies in Public Health Organization and Their Relation to the Tuberculosis Program."

On Tuesday, April 8, the clinical section will meet both morning and afternoon. The program is as follows:

Morning—Dr. F. M. Pottenger, chairman:

Report of heart work.

Parenchymatous Lesions in Childhood—Dr. Chesley Bush.

Demonstration of interesting x-ray films.

Afternoon—Dr. William C. Voorsanger, chairman:

Blood Sedimentation Tests in Tuberculosis—Dr. Robert A. Peers.

Healing in Tuberculosis—Dr. Philip H. Pierson and Dr. W. R. P. Clark.

**The Results of Chest Surgery.**—A round-table discussion of statistics conducted by Dr. Leo Eloesser.

Attention is directed to the final items on the program of both morning and afternoon. It is hoped that all those who possess unusually interesting x-ray films illustrating phases of chest pathology will bring these films for demonstration. In this manner many unusual conditions will be brought before the meeting.

The discussion of the results of chest surgery, to be led by Doctor Eloesser, will be open to all those having available statistics. It is felt that the time has passed when the report of a few cases of thoracoplasty, phrenicotomy and the like is interesting, but a composite picture of the experience of many men along this line should be of the utmost value.

Reservations should be made as soon as possible at the Tioga Hotel, Merced, and should include dinner reservations for the evening of April 7.

**The Pacific Coast Surgical Association** held its first annual meeting last Friday and Saturday, February 7 and 8 at Del Monte.

The officers elected for the ensuing year are: J. Tate Mason of Seattle, Washington, president; Rexwald Brown of Santa Barbara, first vice-president; E. W. Rockey of Portland, Oregon, second vice-president; E. L. Gilcreest of San Francisco, secretary-treasurer.

The council consists of the following: Thomas O. Burger of San Diego, Philip K. Gilman of San Francisco, A. Aldridge Matthews of Spokane, Washington; George W. Swift of Seattle, Washington.

The association will meet next year in Victoria the last week-end in February. Clinics will be held in Seattle the two previous days of the meeting.

**Northern California Neuropsychiatric Society.**—On December 9, 1929, the Northern California Neuropsychiatric Society was formed. At a preliminary

meeting held at the University of California Hospital on the above date, the following officers of the newly formed society were elected: Dr. Julian Wolfsohn, president; Dr. Edward Twitchell, vice-president; and Dr. Mark Gerstle, Jr., secretary-treasurer. It was agreed that meetings should be held on the second Monday evening of alternate months at either Stanford, University of California, or the San Francisco hospitals.

The membership of the society comprises the neuropsychiatric staffs of both the University of California and Stanford medical schools as well as neuropsychiatrists in the San Francisco region and other cities in the northern portion of the state. Twenty-four members have joined.

The second meeting of the society was held on February 10 at Lane Hall at which meeting a paper was read by Dr. F. L. Reichert on some experimental work which he has done on hypophysectomized puppies.

The second paper was by Dr. Helen Detrick (by invitation), and with the third paper by Doctor Proesch (by invitation) constituted a symposium on recent advances in the treatment of epilepsy.

**Medical Library for University of Southern California.**—Gift of the professional library of the late Dr. C. F. S. Tate to the School of Medicine of the University of Southern California and the recent acquisition of the large book collection of Dr. Charles W. Bryson have made possible the establishment of a separate medical library by the university medical school. According to an announcement by Dean William D. Cutter, the library will be housed for the present in two rooms in the basement of Bridge Hall, which are now being outfitted. The appointment of Miss Marguerite Campbell, formerly librarian of the Peking Union Medical School, Peking, China, and of the Boston Medical Library, as custodian was also announced.

The library will be opened for use in a few weeks, with between four and five thousand volumes available for reference.

Doctor Tate whose name will be associated with the founding of this new library was a graduate of the University of Southern California in 1895. He was a descendant of the Fee and Tate families of South Carolina, was born in Oakdale, Illinois, August 1, 1873, and moving to California in 1882, was educated in the schools of Santa Ana and Los Angeles. His medical training was received at the University of Southern California and the University of Pennsylvania, and his practice was carried on entirely in Los Angeles.

**California Conference of Social Work.**—The twenty-second annual meeting of the California Conference of Social Work will be held at Santa Barbara this year, from May 13 to 17. A cordial invitation to attend the conference and affiliated kindred groups is extended to members of social and health agencies throughout California, and to all persons interested in problems of social welfare.

Under the leadership of Justin Miller, dean of the law school of the University of Southern California,



elected president of the conference for 1930, and Erle Fisk Young, Ph. D., chairman of the Program Committee, plans for the Santa Barbara meeting are well under way. "Social Progress and the Law" has been selected as the conference theme, but the program will range over the whole field of interests covered by the standing sections on health, family and child welfare, delinquency, organization and administration, education, recreation, industry, and racial and citizenship problems.

Recreation Center will be headquarters—an ideally central location with meeting places and hotels in close proximity.

Advance information regarding conference plans will appear in the February issue of the conference quarterly bulletin, or may be obtained from the executive secretary, Miss Anita Eldridge, Exposition Auditorium, San Francisco.

**Medical Summer Courses, University of California.** The University of California Medical School will offer summer courses for graduates in medicine from June 2 to 21, 1930.

The first week will be devoted to a review of recent advances in fundamental sciences and in clinical medicine and surgery.

During the second and third weeks, courses of two weeks' duration, similar to those of the past five years, will be offered in general medicine, surgery, the specialties, and laboratory subjects.

## CORRESPONDENCE

### President's Letter to the Members

To the Members:

The present unfortunate confusion regarding the Coffey-Humber cancer treatment appears to call for some statement in *CALIFORNIA AND WESTERN MEDICINE*. The following is a personal statement made in an effort to clarify this subject:

There is grave danger that contemplation of the glorious results of a true cancer cure may so stimulate the imagination of some of us that the necessity for sober proof will be overlooked.

Doctors Coffey and Humber have at no time claimed that their treatment is a *cure*. They have at all times in their statements indicated that much and prolonged critical research must intervene before a positive statement can be made.

The press, on the other hand, has, while generally quoting the authors of the treatment fairly, so magnified certain phases, and permitted its own obvious enthusiasm to dominate the stories, that the unscientific public has quite generally accepted the treatment as a cure.

The result of such publicity is most regrettable. The judgment of the value of the treatment has been removed entirely from scientific environment and vested in the public, which can have no scientific basis for opinion. A painful result of publicity, and one regretted by Doctors Coffey and Humber, is that many cancer sufferers who cannot avail themselves of the treatment will, in hope, delay timely operations.

Another result is the insurmountable impediment to scientific work, which the vast amount of unsolicited material constitutes.

The present status of the treatment, according to its authors, is that in certain cases its exhibition softens tumor masses and reduces pain. In a very few cases, there has been an apparent cure. Sufficient time has not elapsed to announce a cure in any case. Too few cases have been followed through to justify opinion.

Doctors Coffey and Humber do not claim a cure. They have confidence that their treatment has great promise, and they wish time for research.

No final scientific opinion can be formed short of some few years from this date. Preliminary opinions can be of no immediate value. Unfavorable opinions must be unscientific unless based on evidence of value comparable to that required to demonstrate success. It is devoutly hoped that *CALIFORNIA AND WESTERN MEDICINE* may at some time be permitted to publish fulfillment of all hopes for the Coffey and Humber treatment.

Meanwhile let us avoid judgment, whether favorable or unfavorable.

MORTON R. GIBBONS,  
*President, California Medical Association.*

### Subject of Following Letter: Postponement of Presentation of Paper by Doctors Coffey and Humber

To the Editors:

Because of the fact that it has been announced that we are to present a paper, "A Preliminary Report of a Potent Extract from the Cortical Substance of the Suprarenal," before the San Francisco County Medical Society on March 11, 1930, we are sending you a copy of a letter sent by us to the president of that society. The letter is as follows:

February 27, 1930.

Dr. Harold K. Faber,  
President, San Francisco County Medical Society,  
San Francisco, California.

Dear Doctor Faber:

Knowing that the San Francisco County Medical Society is desirous of having a complete report of the work on the extract of the cortical substance of the suprarenals, and that a committee from the society can aid materially in determining the results obtained in the series of cases now being studied, we would be very glad to have such a committee appointed by you from among the members of the San Francisco County Medical Society.

We would also welcome the postponement of our appearance before the society from March 11, 1930, until the general meeting in April, or at such later time as the above committee is ready to report its findings also.

Very truly yours,

W. B. COFFEY,  
JOHN D. HUMBER.

The meeting has been postponed to some date to be announced later and, in order that members may have a basis for discussion when the material is presented, we are setting out in this letter the premises which we believe to be true and upon which we have based our investigations and in support of which we believe we can produce experimental evidence. The premises are:

1. Nature has provided certain controls or "governors" in our physiological make-up, among which is a control or stabilizer of *tissue growth*.

2. This control or stabilizer of the development and multiplication of tissue cells is of the nature of an active principle or hormone.

3. This hormone is produced by certain cellular elements of the body which are found to exist in considerable amounts in the cortex of the suprarenal glands.

4. This hormone or active principle may be produced in other parts of the body yet to be determined. We have found that extracts made from other tissues have what we think is probably an inhibitory effect on cellular growth where normal cellular growth has been disturbed.

5. This hormone or active principle is found in a highly potent form with unmistakable effect upon malignant cellular growth in extracts made from portions of the cortex of the suprarenal glands.

6. This extract containing the active principles has a destructive effect upon malignant tissue, causing its necrosis and death, without destruction of normal tissues.

Very truly yours,  
W. B. COFFEY  
JOHN D. HUMBER.



### Subject of Following Letter: Coffey-Humber Studies Concerning Cancer

Editors' Note: Doctors Walter B. Coffey and John D. Humber of San Francisco on January 6 last, presented to the San Francisco County Pathological Society a preliminary report concerning some cancer studies. Reference is made thereto in an editorial in this issue of CALIFORNIA AND WESTERN MEDICINE. For the convenience of readers of this journal who are interested in this subject, the letter printed below, which was sent upon request to *The Journal of the American Medical Association* and which appeared in the February 1 issue of that publication, is here reprinted. It is hoped to have a full report of the studies of Doctors Coffey and Humber in a later issue of CALIFORNIA AND WESTERN MEDICINE.

The letter was printed under the caption:

**The Effect of a Suprarenal Extract for Malignant Growth.**—To the Editor: In a report made to the San Francisco County Pathological Society, January 6, we pointed out that our experimental work on endocrine extracts began in 1925, attempting to find a vasodilator and a stabilizer of tissue growth. After many failures, an extract of suprarenal cortex from sheep was made which reduced blood pressure when injected subcutaneously. Further development of the work demonstrated that this extract was a stabilizer of growth. A few patients with high blood pressure together with a malignant condition had, under treatment, a lowering of blood pressure from 240 to 150, together with a sloughing of the malignant tissue and subsequently disappearance of the growth. Later, we injected the extract only in patients in whom the malignant growth was inoperable, with the possibility of obtaining autopsies. One patient, who had an embryonal carcinoma of the testes which could not be completely removed, was given the first injection, August 22, 1927, and is now without any evidences of tumors. Another patient with inoperable carcinoma of the rectum and complete obstruction was referred for colostomy, and was given a first injection September 1, 1929. At present this patient is without any evidence of tumor and so far has had no ill effects from the injections and has apparently recovered. Within from twenty-four to forty-eight hours after the first dose, the tumor masses begin to soften, then liquefy, and within ten days begin to slough. If the masses are favorably located, many have even begun to slough within forty-eight hours. Although our series to date is small, we have had an opportunity to study the changes in the tissues of patients who died. (Others we observed clinically and were successful in obtaining autopsy.)

All tissues were studied by Dr. A. M. Moody. The essential changes are necrosis of tumor cells which cannot at present be differentiated from that occurring naturally in malignant tumors. They were present in one patient with primary carcinoma of the kidney; in the tissues of the lungs, about the secondary tumor nodules, which were all necrotic, marked vascularization surrounded each nodule. One patient who had received injections for two and a half months prior to death, and who died from kidney insufficiency as a result of bilateral ureteral obstruction, had atrophic suprarenals, measuring only three millimeters in thickness. This was a primary carcinoma of the cervix which, during the course of injections, had sloughed away. No secondary growths beyond the uterus and bladder were found, although microscopic scattered mitosing cells were present in the bladder wall.

This work to date has been purely of an experimental nature to determine the effect on malignant tumors. Softening, with liquefaction, has occurred in all tumors thus far studied. These tumors, except one, were carcinoma of different types; the exception is a recurrent spindle cell sarcoma, with extensive metastases. Because of these results, a broad plan of study has been outlined with a determination to discover as soon as possible the value, if any, of this

extract in cancer. Until such time as additional data become available, we wish to impress on the medical profession the fact that the work to date, although quite promising, is still in the experimental stage and therefore decidedly inconclusive. The pathologic studies have been made by Dr. A. M. Moody, pathologist of the St. Francis Hospital.

WALTER B. COFFEY, M. D.,  
JOHN D. HUMBER, M. D.,

San Francisco.

February 1, 1930.

### DESCARTES WAS RIGHT\*

By HARRY M. HALL, M. D.  
Wheeling, W. Va.

#### PART II

Notwithstanding deflections from the ranks of those who hold to the old ethics, there are still many left. It represents something akin to the silent vote in politics. This great body of medical men is held together with a rather indescribable, invisible tie that, for want of a better term, I shall refer to as a "gentleman's agreement." It still is very much in existence and will probably be the saving grace of the profession in the time of extreme stress and trouble. This rather remarkable yet intangible force acts automatically, so to speak, in the last analysis, to defend the members of the medical profession against dangers from without. Some day or other, rather soon I think, this clement rather reluctant to engage itself in conflict will descend in full force on our notorious detractors and suggest they forget the high cost of medical care until they mitigate some of the preceding causes that lead up to it. Let some of them make instruments cheaper, x-ray outfits less expensive, and other paraphernalia within the bounds of moderation. We must teach the laity it is a dangerous occupation to heckle and disturb the medical profession and that it is a tragic thing to clip our wings. Surely we must have had an efficient and wonderfully capable line of medical men in the past to bring so complex, baffling and obscure a thing as disease up to where it is today. Considering the tremendous amount of work required to establish every shred of information about illness and disease and make it conform to the major pattern of modern medicine, the medical men of the past must have been marvelously endowed. The future should be measured by the past. To make us into a mechanized group of robots would be disastrous. People may be standardized when well, they are all individualists when ill. A machine cannot attend them.

#### IMPORTANCE OF LEADERSHIP AND LOYALTY

The time has come for the medical profession to pick their leaders with great care. This will involve the rejection of great names as executive officers. Perhaps a way around it would be to create two presidents, one the chairman of a board, the other the regular president. One or the other could be made honorary. The head of a large medical organization should be a militant and aggressive leader, partaking of the qualities of a Roosevelt or a Mussolini without their despotic, autocratic qualities, although to an extent he should have a little of these. Great surgeons and internists, including the specialists, are not necessarily men of such stamp. In fact, they are often the very opposite. Usually they have a distaste for conflict, are given to conservatism and can be found clinging to the thought that to yield is better and more peaceful. Having acquired wealth, fame and almost everything else, they find the world smiling and agreeable. It is next to impossible to ask them to recall their earlier days of privation. It is difficult for them to sense the problems of the modern rank and file. They are old warriors whose eyes have grown dim to the peculiar insults of the hour. They cannot sense the struggles of the minor men of the

\* Part I of this paper was printed in the February issue.



profession. Contract practice and state medicine do not seem to them as anything but passing fictions of the day. Great industrialists, often among their patients, are good fellows and cannot have any designs on medicine. They move in an atmosphere of pleasant relations, quiet regularity and very little competition. Other medical men refer work to them; they are called on to address great assemblages; their words are considered the last thing in wisdom; men surrounding them look up to them; they travel, have their social conquests; statesmen, ambassadors, the great and near great consult them; life is surely very pleasant. It would be next to impossible to have them believe that out in the open doctors are being deprived of work, forced to accept reduced wages, are barely making a competence, are being crowded into narrower spheres, are ridiculed in the press and magazines, beset by trivial malpractice suits, having a struggle to preserve their traditions and wondering whither they drift. The problems of the young man just entering medicine stand no more chance of being really understood in their stark and naked truth by these great men than did the fortunes of that other young man seem to have any advantage over the camels passing through the needle's eye. For us to venerate; for us to regard as still great teachers through experience; for us to love; for us to picture as making us scientifically what we are, they are still the old idols. But as to making them active presidents, executives, officers or directors, we believe that is neither wise nor practical. We have some of them now bursting into print with strictures on us which are at times more embarrassing than the laymen give out. Carrying enormous weight, the public counts on their statements as actually the gospel truth, whereas they are really only opinions of single men.

Great names in medicine often perform, heedlessly, great and small infractions of the principles of ethics which we are quite sure appear trivial to them, and so set a bad example to lesser men. St. Paul probably made this clear in his dissertation on not eating what may be poison for the other fellow. When great medical men are solicited to testify to the great health qualities of a cake of yeast or a baking powder they should recall this. The lesser man would not be led to do a lot he does if he did not look on at the great and near great doing it before he does. I believe vanity has a lot to do with it. A great medical man sometimes reflects on history and the dictum, "The king can do no wrong," and he forthwith appropriates the idea. This establishes a precedent and down the line it goes to others who promptly feel if he can do it then it must be all right. If enough do it that particular part of the ethical code goes the way of the Eighteenth Amendment. Christ was led up into the mountain and offered the whole world to succumb. History records that he promptly rejected the offer.

A house divided cannot stand. With our usual lack of foresight, we are dividing. The College of Surgeons, the College of Physicians, the Southern Medical Association, the Interstate Postgraduate Assembly, and numerous other bodies give ample proof of this. Organized, I believe, for scientific purposes alone, they have not adhered solely to this idea. As an example, the American College of Surgeons exercises a control over hospitals. This implies that hospitals are solely surgical. We know this is not the case. It is a function that the American Medical Association alone should carry out. This is no criticism of the College of Surgeons as being officious. It may be they saw the need of it first, and they have handled it admirably. Nevertheless, it is not their duty. I am quite well aware that the argument is advanced that not all of the medical men of the country can gather in one place at one time; that specialists cannot expect the American Medical Association to lend too much attention to their wants and they, therefore, must have their own societies; and, since even the American Medical Association publishes separate archives to meet their requirements, it is just as logical to arrange separate meetings. The surgeons say they

cannot hope to discuss all their problems even when by themselves for the better part of a week. The internists give the same reason. The Southern Medical Association doubtless has its reasons while the Interstate Postgraduate Assembly has a feeling it is fast becoming the largest single gathering of medical men that meets at one time. All these reasons are doubtless correct, and the profession of medicine requires all these associations. However, they are getting to have an uncomfortable habit of flourishing their power, extolling their size and referring to their accomplishments outside of their scientific realms. This is quite human and altogether natural. To those who are responsible for the brilliant performances of these strong and notable organizations, nothing but praise is perhaps due, and I am here referring to these courses solely as to what might happen. A great many medical men who fail to stop and consider realities actually gain the idea that these associations are somewhat competitive to the American Medical Association and not corollaries thereto. Capable of but a single allegiance, they pour out all their loyalty in one direction. It is impossible for them to brook any suggestion that there must after all be but one big single organization to which we must look to settle our several perplexities. None of the members of these organizations can see any harm in too much division. To the most, they are stated as mere side shows to the main tent. I rather gather that this is not so. It occurs to me that a separation into so many groups is dividing our forces—crystallizing our ready solubility from one clear and potent fluid. We shall dillydally around with them until we become like a lot of Balkan states that never know just who is governing them and are destitute of a cohesive army and innocent of a navy, and are on the whole the very quintessence of impotency. And all of us should carry around with us constantly this thought that if anything ever causes the fall of the American Medical Association the demise of all of the others will quickly follow. Probably the American Medical Association should have a banner or a flag and whenever any other medical organization meets it should be unfurled across the stage to remind the audience that united we stand; divided we fall.

#### INCREASING COMPLEXITY OF MEDICINE

The increasing complexity of medicine is the last subject with which we shall concern ourselves. It is in some ways the most important one of all. American life today insists on pursuing any subject until it is lost in its ramifications. The law makes the simplest case a maze of technicalities. An involved one runs into years with volumes of testimony. Religion, divided into many sects, has become such a labyrinthal matter that no one cares to approach it for simple comfort. Government, especially at Washington, has come near to defeating itself by the excess of its excursions. A tariff bill is an affair of months, an income tax blank too much for any ordinary man. Not so in the powerful and ever increasing industrial scene, where simplicity is the outstanding feature. Thousands are spent to reduce the parts in a machine. Consider your telephone. Lose yourself in wonder over the arc light. Grow eloquent over your microscope.

Medicine is perhaps the most complex of all things. As is time and eternity, so is medicine; as is the geologist and his rock, so is medicine; as is the evolutionist and his story, so is medicine. It embraces all things, considers all things, encompasses all things. It is beyond one mind to fathom. It transcends all efforts to visualize it. To try and place into language the confines of its portentous schemes, its boundaries, its limitations are quite beyond our efforts. To attempt to assemble some simple words that would correlate disease, its etiology, diagnosis, treatment and termination can scarcely be done, nor could a dozen men each taking a division contribute greatly to the elucidation. Medicine is a vast enterprise, a prodigious science, a very involved art. As a single physician gazes at a single patient before him, some-



thing of the stupendous phantasmagoria of medicine rushes before him. It can be well-nigh appalling, and it is well that disease is inclined to appear in a more simple form as commonly seen. But in that single patient before him, what dreams may come, what possibilities there are for all those other thousand maladies to bear down. No wonder the individual doctor lifts his eyes to "that inverted bowl" for counsel, to find it not. No wonder he seeks consultation. No wonder he gathers in groups. No wonder he assembles clinics. No wonder he rushes to foundations. Rebecca in Ibsen's "Rosmersholm" killed Mrs. Rosmers by constantly suggesting to her the nature of her defects in meeting her duties. The wife jumped into the mill race. The enormity of medicine is killing off the single practitioner in the same manner.

I believe that it is generally conceded that one can absorb so much of a subject, after which the brain palls. In making out programs for medical gatherings this is lost sight of entirely. So we have the spectacle of almost a week of addresses from eight until nine with intermissions for meals. Again we have the circus idea, three rings and look at what you like. Few minds can retain what they receive in such a scientific festival. The span of life to most active men, as far as medicine is concerned, is doing well if it is forty years. As one stands almost like a child on the shores of medical life and gazes on the mighty seas of medical literature, medical knowledge and medical practice, no wonder one feels like a lone atom or a mere pigmy, a tiny unit in the cosmos. With medical societies multiplying; medical meetings in the city, state, country, and even abroad, on the increase; medical requirements born as were the leading characters in "Pigs Is Pigs"; rules, penalties, laws, standards, codes, tables, statistics, calories, calculations, tests of function, laboratory schemes, blood chemistry, biochemistry—is it any wonder one human mind, convoluted as it is, reacts in rebellion at the tremendous load? The logical result of all this is to give some doctors an inferiority complex. Many doctors die of cardiovascular disease, but the etiologic factor in the form of incessant worry that caused their malady was none other than the sense of inadequacy they gave up to, after realizing the utter vastness of their calling. Because we have all come to sense the unlimited confines of our vocation, many medical men are unwilling to trust to their individual judgment any more. This naturally leads to many consultations in which there are specialists on many subjects. To obviate the spread, the group was created. The group likewise must fall back on men from greater groups. Naturally, too, this contributes to the high cost of medical care. However, it results in no higher fee to the original physician. It is very evident that we can have too much discussion of a case, carrying it to where the perplexity is greater than ever and the patient may die in the process. Doctor Butt, a West Virginian, once wrote a paper on gastrotomy in relation to a young man who had eaten frozen apples and cabbage and then drank water. In this, he remarked that had he held consultation instead of making up his mind individually to operate, the patient would have died. In numbers there is safety is undoubtedly true, but it has its limitations.

So medicine will have to be simplified. Its literature, its nomenclature, its activities will have to undergo revision sooner or later. Physiologists and pathologists must bear a heavy load of responsibility in the next decade. It has been said the test of the medical profession in the future will be, "Is surgery still existent after fifty years?" If by that time we have not found the means to kill the pyogenic bacteria—streptococcus and staphylococcus—as well as the cause and the elimination of cancer, we will have suffered a grievous failure. If we cannot reduce metabolism and biochemistry to more simple terms, then, I would say, something is radically wrong with us.

Hospitals with a thousand beds, medical centers that look like medieval cities, diagnostic clinics the size of hotels, laboratories that resemble railroad

terminals make us look like a vast enterprise. Some day simplicity will come like a tornado and level them all.

#### CONCLUSION

In conclusion, I feel that this narrative must have sounded its share of discordant notes and revealed a melancholy outlook. I feel as I end it, like the ghost at a feast. To arraign even lovingly the faults and failings of the profession we venerate breathes the air of ungratefulness. There is something unpleasant about the actor that plays the character of filmy nothingness. The part calls for a stalking grimness, a seeming lack of substance, a cold clamminess, and always one must be pointing—always pointing—at the foibles of the other guests, with a sort of bony finger from a hand that none can grasp. But ghosts have slain their Macbeths—although not directly. To have given some of the views of this recital has cost me some grief and sorrow, and not a little perturbation. Had I not had affection for over thirty years for the medical profession and am ever jealous of its honor, I could never have tried to mirror some of my own inconsistencies. We must always to our own selves be true and be courageous enough to examine ourselves, as we are frank about confessing our errors in the performance of our duties. So I believe the several things I have related to have some part in our unrest. My judgment is anything but infallible, but there the matter rests. To us, the man to be feared is the one who says, "Always with a smile" and that all our ills will eventually right themselves. To us, he is an incubus.

We may be in for a period of partial eclipse, but be that as it may we can always count on enough hardy souls to affect a renaissance. We may be too deeply involved in some of our obsessions to extricate ourselves at once. We may see state medicine, although I strongly doubt it. We may see our hospitals, our work and our followings taken from us and controlled by large units. I doubt that, too.

Notwithstanding the character of what has gone before, our great passion is that the medical profession, taking it by and large, is the greatest intelligent unit in civilization today. The purport of this whole paper is a deep chagrin at our not being the chief controlling factor in the world's affairs. It appears to me that we alone seem to understand the meaning of humanity. In modern dramas and in present-day literature it seems to me that it is the medical man when he appears who alone has a great compassion and understanding for all the other characters.

Picture a world if you can where all the doctors of today, ministering as they are at this very hour, were suddenly eliminated, and in their place were machine-like personages that sought from files and indexes the precise methods of approach, with personality eliminated. It is unthinkable. When the crucial time comes, if it ever does, I feel that the great medical solidarity will be found with capable leadership in the perfected organization of a greater and more unified American Medical Association; that industrial interference will come and go; contract practice appear and disappear, and state medicine attain a growth only to sicken like a weed. Medicine is too old a custom for anything to long stop its progress, arise what may, for nature and evolution, progress and civilization have embraced medicine as a brother of their blood. You can no more block it now nor change its destiny than you can that of existence. Medicine has become a very member of the integral body of life itself. The martyrdom of all the great figures of its past has seen to that. Concentrate on it as you may it will ultimately appear unscathed, for there is something indestructibly valid about it. Unfaithful as some few of its followers may be to the meaning of its finer truths, all will subscribe to its authenticity. To those who have embraced it, some sense of immortality surrounds it. Hardened as any doctor may become to its altruistic prophecies, he never seems to lose a clinging sense of its subtle proofs of somewhere having a great destiny. What



else can so subscribe? I know of nothing. So on this rock we found our hopes and yearnings. Whatever happens, back we will come, stronger, more vibrant, more invincible, more powerful than ever, led, it may be, by some great voice from among us filled with the intense clairvoyancy of Descartes, and proving that he was right when he said:

"If ever the human race is lifted to its highest practicable level intellectually, morally and physically, the medical profession will perform that service."

#### DISCUSSION OF PAPERS OF DOCTORS HALL AND MCBRAYER (IN PART ONLY)

Dr. George H. Kress, Los Angeles: Doctor Hall has given us a very keen analysis of certain conditions which are of vital importance to the future of medical practice in America. I wish to thank him for this splendid analysis and also for the suggestions of future action which are indicated both in and between the lines of his paper.

He tells us of conditions as he has observed them in the industrial State of West Virginia. His picture fits in very well with some of the experiences we have had in California. We have been much distressed with certain drifts in medical practice in our state, and the officers of the California Medical Association have given considerable study to ways and means whereby undesirable features of modern-day medical practice might be overcome.

One of our officers, Dr. Walter Coffey of San Francisco, recently brought to our attention a plan that seemed to us to have many commendable features.

As we see this problem, the well-to-do citizens and very poor citizens are almost always assured of good medical care. The rich can choose whom they desire for medical advisers, and the poor receive a very high grade of medical care from members of the attending staffs of public hospitals. The in-between class of citizens, the so-called white-collar brigade, seem to be the greatest sufferers, because with the present high cost of living, with all its modern-day comforts and luxuries, there is usually very little money left to pay hospital expenses or doctors' fees. If a plan could be put into operation to give proper care to this class of citizens, much of the cry about the high cost of medical care would not be heard.

The opening editorial of the November issue of our official journal, *California and Western Medicine*, is a statement which I was instructed to write by the Council of the California Medical Association, and which is entitled "A California Plan to Combat State Medicine—Important Notice."

That was a somewhat high-sounding caption, but it was used to call the attention of members of the California Medical Association to certain drifts in medical practice and to caution individual members to make no contracts, because the Association's officers were considering ways and means of safeguarding the rights of all members.

In the plan proposed by Doctor Coffey, who is the chief surgeon of the Southern Pacific Railroad, and which he submitted as a basis for discussion, it is proposed to bring into being an organization that will act as the trustee or business agent of its members. These members will send their bills for professional services to the trustee organization, which organization will collect from employers the money which will guarantee skilled medical care to employees and the families of employees. The employees are to be permitted to make their own choice of physicians as at present. In other words, every effort will be made to continue private practice along the same lines as at present, except that the central or trustee organization will collect the moneys and then reimburse the physicians.

Our legal advisers are making a study on different plans whereby such a central or trustee organization may be brought into being. There are, of course, many obstacles facing us, but our Association is prepared to spend money to find out ways and means whereby the interests and standards of medical practice may be maintained in California. There seems to be a general impression among the officers of the California Medical Association that if the medical profession does not find a solution of some of these problems that some kind of a plan will be thrust on it under lay influence and domination, and which could be so harmful that medical practice, as we now understand it, would receive a serious blow.

We are not prepared to give out details concerning the plans we have in mind because they are still in what might be called a preparatory stage. We are hopeful, however, that we may be able to devise ways and means that will place scientific medicine in its proper place before the citizens of California. We believe it will be possible to give the highest type of medical and surgical service to citizens of less than \$2500 yearly income, at the same time protecting in fullest measure the rights of the individual practitioner, and permitting also the development of a stronger and larger California Medical Association. We have no desire to engage in reckless experiments, but we are convinced that something must be done, and that talking in the abstract or in platitudes will not solve our problems. We intend to carry on our investigations. If we can find a legal and ethical plan of organization that will permit us to maintain medical standards, and also protect the economic interests of

physicians, while at the same time we can give as good and, we hope, a better service to the patients under discussion, then it is our intention to use our best endeavors to put such a plan into operation. If that should come to pass, our state journal will give ample publicity to the matter.

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Dr. H. O. Reik, Atlantic City, N. J.: In my humble opinion as an editor, these are the two most remarkable contributions that have been made to this conference of secretaries and editors during the past several years.

I have no intention of trying to discuss the various problems introduced in those papers. I think that the two papers give us food for thought for a long time to come, because they express so clearly and so succinctly the great problem that confronts the medical profession today; a problem which is not duly appreciated by the vast majority of the members of the profession. I wish it were possible to compel every practicing physician to read both these papers.

While I cannot, because time does not permit and I haven't the ability to, discuss the technical details of these papers, I do want to take advantage of the opportunity to pay a tribute of respect to the two authors. I appreciate Doctor McBrayer's temerity in offering a solution, which is apparently a good one; it may be the correct one, the best one. That remains to be seen. His reference to President Harris' several papers on this subject is timely, and we should pay attention to them.

I want to pay even a higher tribute of respect, if Doctor McBrayer will permit, to Doctor Hall for the presentation of his paper. He is the first man, I think, among us who has had the courage to stand here and tell us not only the truth, but the whole truth. He must have anticipated when preparing the paper that he would give us entertainment and amusement in his criticisms of big business, but he must also have anticipated that he would make us squirm when he criticized members of the profession and their acts, and it is for that particular part of his paper that I want particularly to express thanks. This morning, at the breakfast table, I confessed to my chief that I have in my desk several papers and editorials, some of which represented my best thought, that I had not had the courage to print. Doctor Hall has given me some moral support today. I think he is the "noblest Roman among us all."

## PUBLIC POLICY AND LEGISLATION

In the current issue of *CALIFORNIA AND WESTERN MEDICINE* is printed an editorial dealing with narcotic laws, and therein the suggestion is made that members of the California, Nevada, and Utah medical associations write to their respective Senators and Congressmen to secure copies of the proposed Porter Narcotic Law, which is known as "H. R. 9054." For the convenience of members who wish to cooperate along this line, the names of the Senators and Congressmen from these three states are here printed. An easy method of address for United States Senators or Congressmen would be as follows:

Hon. Hiram W. Johnson  
U. S. Senator from California  
Washington, D. C.

Hon. Clarence F. Lea  
Congressman from California  
Washington, D. C.

\* \* \*

#### CALIFORNIA

##### Senators

Hon. Hiram W. Johnson of San Francisco.  
Hon. Samuel M. Shortridge of Menlo Park.

##### Congressmen

Hon. Clarence F. Lea of Santa Rosa.  
Hon. Harry L. Englebright of Nevada City.  
Hon. C. F. Curry of Sacramento.  
Hon. Florence P. Kahn of San Francisco.  
Hon. Richard J. Welch of San Francisco.  
Hon. Albert E. Carter of Oakland.  
Hon. Henry E. Barbour of Fresno.  
Hon. Arthur Monroe Free of San Jose.  
Hon. W. E. Evans of Glendale.  
Hon. Joe Crail of Los Angeles.  
Hon. Phil D. Swing of El Centro.



## NEVADA

## Senators

Hon. Key Pittman of Tonopah.  
Hon. Tasker L. Oddie of Reno.

## Congressman

Hon. Samuel S. Arentz of Simpson.

## UTAH

## Senators

Hon. William H. King of Salt Lake.  
Hon. Reed Smoot of Provo.

## Congressmen

Hon. Don B. Colton of Vernal.  
Hon. Elmer O. Leatherwood of Salt Lake City.

## TWENTY-FIVE YEARS AGO\*

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. III, No. 3, March 1905

#### From some editorial notes:

. . . *Our State Legislators.*—It is rumored that the legislators at Sacramento have gone crazy, and there seems to be some ground for the rumor. The anti-vaccination bill passed the Senate and we learn that it is very liable to pass the Assembly though, at the time of writing, the final result is not known. . . .

. . . *Bind Your Journals.*—Do you not wish to have your volumes of the journal bound and preserve them for future reference? Remember, these volumes are the full transactions of the state society and also the transactions of most of the county societies.

. . . *Danger in X-Ray Exposure.*—A warning against the haphazard and indiscriminate use of the x-ray by inexperienced operators seems particularly opportune at this time, as the lay press of San Francisco has so recently published the case of the unfortunate Mrs. Fleishman-Aschheim, whose arm was amputated, a few weeks ago, for an epitheliomatous degeneration caused by repeated exposure to these rays. Dr. Philip Mills Jones, the pioneer of this work on the Pacific Coast, suffered from x-ray burn of the hand as early as 1896; and though in 1900 he gave up this work entirely, even at the present writing trophic and degenerative changes are going on in that important member of his anatomy. . . .

. . . *The Relation of the American Medical Association to Medical Advertising.*—(A Statement by the Publication Committee).—Probably only a few of the members of our society know that the advertising pages of the *Journal A. M. A.* have been the subject of criticism almost continuously for more than ten years past. That our members may know that we have not acted alone nor without sufficient consideration in the criticisms which have been made in the state journal, it has been thought wise to place before you a brief summary of the facts as they are to be found recorded in the pages of the *Journal A. M. A.* . . .

From an article on "Neurasthenia in Childhood" by Hubert N. Rowell, M.D., Berkeley:

We are indebted to the late Dr. George M. Beard for the first comprehensive description of this disease, which he presented some twenty-five years ago. In so doing he adduced nothing original, and nothing which had not been observed by others, decades before; but, grouping an array of nervous phenomena into one composite photograph, he introduced into our nosology the term "neurasthenia" in lieu of what had formerly been known as nervous prostration or nervous exhaustion. . . .

\* This column aims to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

From an article on "The Surgical Treatment of Chronic Tonsillitis" by J. A. Black, M.D., San Francisco:

For many years this subject would cover but a small space on paper, as it was considered that the surgeon had done all that was required of him when, by means of a tonsillotome, he had removed what showed of an hypertrophied tonsil, and probably with it a good portion of the anterior or posterior pillars, creating so much of an after-disturbance in the throat that no singer or public speaker would submit to removal of the tonsils for fear of a total or partial loss of the speaking or singing voice. . . .

From an article on "The Effects of Tonsillotomy" by W. B. Stevens, M.D., San Francisco:

The effects of tonsillotomy naturally fall into two groups:

First—The immediate or those closely succeeding the operation, and which are for the most part transient; and

Second—The ultimate, which are more or less permanent. . . .

From an article on "Some Remarks on Gonorrhea in Women" by Beverly MacMonagle, M.D., San Francisco:

The fact that gonorrhea produces the most serious and profound changes in the pelvic organs cannot be too strongly insisted upon.

Its frequency is difficult to state; it varies, both in localities and in great cities, within wide limits, so that it is impossible to formulate any statement that can have any general application. . . .

From an article on "Flies as Carriers of Contagion" by George H. Aiken, M.D., Fresno:

For a physician to have presented this subject to the medical profession twenty years ago would have been to invite ridicule with criticism, but thank God we have made advancement since that time. . . .

From an article on "Aseptic Catheterization of the Urinary Passages" by M. Krotoszyner, M.D., and W. P. Willard, M.D., San Francisco:

In treating the subject of aseptic catheterization, we must consider the sterilization of catheters, the preparation of the urinary channel, and the introduction of the instruments in an aseptic manner. . . .

From an article on "The Sanitary Needs of the State" by N. K. Foster, M.D., Sacramento:

That government best serves its subjects which gives to them the largest measure of protection in all their rights and privileges. If "life, liberty and the pursuit of happiness" are inalienable rights, the means of acquiring and preserving them are also. . . .

#### From miscellaneous items:

"Mother Mary." Now, who is this Mrs. Eddy? She is Mrs. Mary Moss Baker Glover Patterson Eddy. Mrs. Eddy has had three husbands, and the last one, she says, "died of arsenical poisoning mentally administered." . . . —Dr. O. T. Osborne. . . .

An Opinion From Virginia.—"We are very much in sympathy with that excellent and high-class publication, *The California State Journal of Medicine*, in its severe arraignment of the *Journal of the American Medical Association* for ethical laxity, if not for its gross violation of ethics. . . .

. . . —*The Southern Clinic* (February, 1905). . . .

#### From Medical Society Reports:

Pasadena Branch, Los Angeles County—At a meeting of the Pasadena branch of the Los Angeles County Medical Association at which there were thirty members present out of an enrollment of forty-two, the



following resolution was presented by Doctor Bridge and unanimously adopted by the section:

Resolved, That it is the sense of this section of the Los Angeles County Medical Association that the existing medical law should be left on the statute books as it is and that no further medical legislation should be enacted at this session. . . .

. . . The exaugural of Dr. F. C. E. Mattison was on the "Relation of the Physician to the General Public." Doctor Gaspar Miller of the William Pepper Laboratory, Philadelphia, was present and spoke instructively of the effort of Philadelphia to get a better milk supply. . . .

**Placer County**— . . . By the resignation of Dr. R. F. Rooney from the secretaryship of the society, which position he has held since the organization was first started in 1889, its members lose an officer whose untiring energy, straightforwardness and high ethical principles have been the means of bringing this society to the successful position it now occupies. . . .

**San Francisco County**— . . . The committee appointed to consider the advisability of establishing a milk commission reported as follows: . . .

. . . 1. There shall be a milk commission of the San Francisco County Medical Society, whose duty it shall be to examine milk submitted to them by dairymen and certify as to the result of such examination, with the object of obtaining pure milk for infants and invalids. . . .

**Shasta County**— . . . Resolved, That the Shasta County Medical Society hereby reaffirms and emphasizes its belief in proper vaccination as a protection against smallpox, and that it is further of the decided opinion that inoculation with pure vaccine virus, followed by cleanliness of the wound with good sanitary surroundings, is an entirely harmless and innocent measure. . . .

## DEPARTMENT OF PUBLIC HEALTH

By W. M. DICKIE, *Director*

### Rocky Mountain Spotted Fever Vaccine Available.

Dr. R. R. Parker, special expert, in charge of the United States Public Health Service Rocky Mountain Spotted Fever Laboratory at Hamilton, Montana, advises that Rocky Mountain spotted fever vaccine for 1930 will be available for distribution from that laboratory shortly after February 1. The same plan of distribution will be followed as during previous years, namely, the vaccine will be forwarded directly to physicians upon application. The amount available will likely be considerably greater than heretofore.

1. The vaccine is furnished to physicians without charge, and it is hoped that any charge for administration will be nominal.

2. Requests for vaccine should be addressed to the Officer in Charge, United States Public Health Service, Hamilton, Montana, and should specify the number of persons for whom vaccine is required.

3. It is desired to make the vaccine available to all who wish to take it. However, it is expensive to manufacture, and although it is expected that vaccine can be supplied in any amount likely to be required, at the same time it is desired to avoid wastage. Physicians are likely to base requests on the amount used in the year just past. This is not a reliable index since experience has shown that local demand in most instances is in direct proportion to the local prevalence of cases, which is a variable factor. Therefore, in order that the most advantageous distribution of the vaccine may be made it is suggested that requests be conservative, and repeated several times if necessary, in order that physicians may not find themselves with considerable amounts of unused vaccine at the end of the season as has sometimes happened, especially in

1929. Requests can usually be filled the same day as received and, if wired in, there will be but a short delay in receiving the vaccine.

4. Full directions for administering the vaccine accompany each lot forwarded.

5. *It is earnestly requested that the Hamilton Laboratory be informed of any case of spotted fever occurring in a vaccinated person and that the attending physician keep as detailed records of the case as circumstances permit.* Information by wire is desired if possible, so that, if feasible, a representative of the Hamilton station may visit the case concerned.

### Pork, Insufficiently Cooked, Causes Trichinosis.—

Since Christmas, twenty-five cases of trichinosis, due to eating pork which was not thoroughly cooked, have been reported in California. The State Department of Public Health has issued a warning urging that all pork used for human consumption be cooked until it is thoroughly white with no sign of red meat. At this season of the year, when pork is used in large quantities, cases of this severe and painful disease occur with considerable frequency. Some cases occur among certain foreign-born residents who are in the habit of eating raw ham and raw sausage. The trichinosis death rate is very high among such individuals. Very often roast pork is served teeming with red juices in the center of the piece, while the surface portion is well done. Care should be taken in cooking pork sufficiently long to insure that it is thoroughly cooked throughout. A temperature of 160 degrees F. will readily destroy the parasites that cause trichinosis.

Symptoms of the disease generally occur between the seventh and tenth day after eating the infested meat. Symptoms of trichinosis generally begin with fever, diarrhea, and other intestinal symptoms, followed by pains in the muscles and joints. The onset of these pains is coincidental with the enlargement of the embryos of the parasites in the muscles. The ankles and eyelids become swollen. The fever may be continuous and it may last for several weeks. Public health authorities recognize that the inspection of pork meat is of no advantage in the prevention of trichinosis. The only feasible method of prevention lies in thoroughly cooking all pork products before eating them. Cases of this disease reported during the past week have occurred in San Francisco, Alameda, Oakland, and Petaluma.

During the four weeks ending January 11, 1930, seventy-two cases of trichinosis were reported to the State Department of Public Health. All of these cases were due to the eating of undercooked sausage.

**Control of Venereal Diseases Is Important.**—The Public Health Service has continued its efforts to reduce the prevalence of venereal diseases, through coöperation with state and local health authorities, by the carrying on of educational work and the conducting of research in problems related to the treatment and control of syphilis and gonorrhea. New activities recently undertaken included an investigation of the syphilis problem among rural negroes in the southern states and a campaign for prevention of venereal diseases among seamen in the American merchant marine and other beneficiaries entitled to treatment in the hospitals of the service.

State health authorities reported a total of 195,559 cases of syphilis and 156,544 cases of gonorrhea for the fiscal year 1929. Clinics operated under state supervision reported 120,315 new patients and 2,128,417 treatments.

**Births, Deaths, and Marriages Increase.**—The increase in the number of births, deaths, and marriages in California is commensurate with the increasing population of the state and each year the activities of the Bureau of Vital Statistics of the State Department of Public Health thus become more extensive. Four hundred thousand birth, death, and marriage certificates have been filed with the State Department of Public Health during the past two years. The



state index of births, deaths, and marriages which occurred since 1906 now contains more than five and one-half million names. The name of the child is indexed, as well as that of the father; the name of the bride and also the name of the groom; the name of each decedent is also indexed.

The demand for certified copies of records comes from a wide variety of sources. The bulk of them, however, are received from attorneys, veterans' welfare organizations, organized charities, police departments, insurance companies, interested relatives and individuals. Detailed tabulations of births, deaths, and marriages are available at all times. A careful study of the vital statistics of the state reveals the social trend of the population and provides a reliable index for the direction of activities in the prevention and control of disease, as well as activities that may lead to the betterment of faulty social conditions.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, M. D.  
Secretary of the Board  
News Items, March 1930

Of interest to every practicing physician in the state is the case against Dr. S. S. Kalman, Roseville physician, which was disposed of yesterday in the court of Don L. Bass, Justice of the Peace for Roseville. Doctor Kalman was charged on December 25 with illegal possession and sale of narcotics, the alleged evidence being based upon a statement by a certain narcotic addict, who was apparently being employed to trap physicians by well simulated physical anguish, while successfully concealing the fact that he is an addict. Doctor Kalman was at first held for trial before the Superior Court, but investigation developed that his possession of narcotics was wholly legal and rather less than the average for practicing physicians. It further appeared that his administration of a minimum dose of pantopan to the patient in question was neither illegal nor improper, but he was held to have committed a misdemeanor in the fact that he did not report the treatment to the enforcement board and the case was remanded to the Justice Court for hearing on that basis. Doctor Kalman readily admitted that he was at fault in failing to make the report and paid the fine assessed by Judge Bass. The case involves rather a close point of law as to what constitutes a reportable and a nonreportable treatment. As the amended law was enacted by the last legislature, there is as yet no court decision to define this point. Until the courts have cleared up this point, physicians will only find safety in refusing to alleviate the sufferings of transient patients, or if it be done, the physician must declare the patient to be an addict . . . (Roseville *Tribune*, January 15, 1930). The records show Dr. S. S. Kalman was fined \$100.

Following a hearing before the board on a charge of alleged illegal operation, the license of William A. Lang, M. D., Long Beach, California, was revoked by the Board of Medical Examiners, February 4, 1930.

The license heretofore held by George E. Darrow (Azusa, California), to practice as a physician and surgeon in the State of California was revoked at the regular meeting of the Board of Medical Examiners held in Los Angeles February 4, 1930, after a hearing based upon charges of illegal operation. (Previous entries, September, October, and December 1929.)

The license of Wilson McKenery Moore, M. D., Los Angeles, called before the Board of Medical Examiners for violation of the terms of his probation, was revoked February 5, 1930, after a formal hearing before the board. (Previous entry, September 1929.)

The license of James A. Hadley, M. D., revoked March 1, 1928, was restored by the Board of Medical

Examiners February 5, 1930, and Doctor Hadley was placed on probation for a period of five years, during which time he is not to have or apply for either an alcohol or narcotic permit.

Superior Judge Johnson, in a recent decision, sustained the action of the Board of Medical Examiners in revoking the license of Fred B. Tapley, Marysville physician, July 17, 1929. (Previous entries, September and November 1929.)

The Federal Grand Jury today returned an indictment naming Dr. I. Jesse Citron, Beverly Hills physician, in thirty-one counts, charging sale of narcotics to Alma Rubens, film player. . . . According to Assistant United States Attorney William Gallagher, the new indictment naming Citron places emphasis on the asserted bartering in morphin with the stricken movie actress. The indictment charges that on thirty-one occasions the physician sold morphin and cocaine to Miss Rubens illegally (Hollywood *News*, January 24, 1930). (Previous entry, September 1929.)

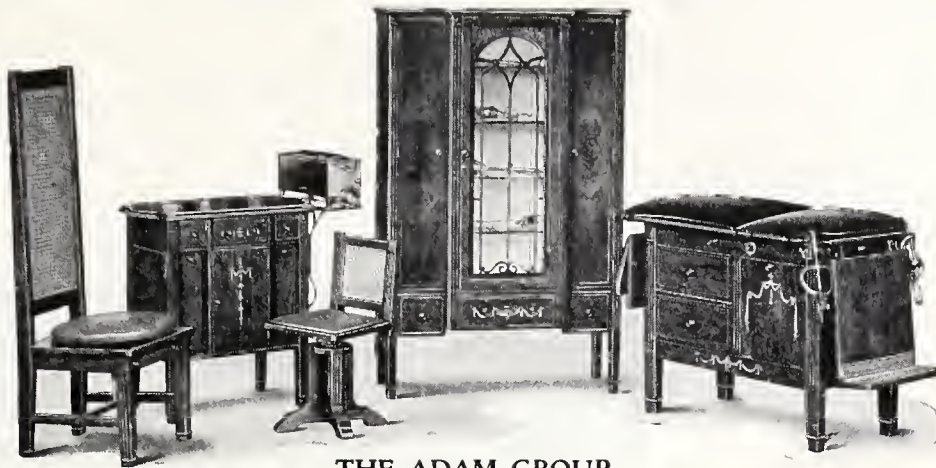
After partially hearing the charges against Dr. Fay E. Cramer, Inglewood physician, the Board of Medical Examiners continued the hearing to the July meeting to be held in San Francisco.

Charged with practicing medicine without a license, Dr. John P. Shepherd, operator of the Hillside Sanitarium in Rincon Valley, was arrested today by J. W. Davidson, special agent of the State Board of Medical Examiners. Shepherd was released on \$250 cash bail posted with Justice of the Peace Marvin T. Vaughan here. . . . According to Davidson, Shepherd produced no records to show that he is a licensed practitioner. The method of treatment used at the sanitarium, which specializes in tubercular cases, is known as the "Vapor" method, Davidson said. Doctor Shepherd established the sanitarium here last August, coming here from Arizona where he had been associated with another physician, according to Davidson. Shepherd told Davidson that he was licensed in eastern states and that he was graduated from a Philadelphia medical college (Santa Rosa *Republican*, January 27 1930). Failing to find that anyone by the name of John P. Shepherd had filed an application, on October 18, 1929 and January 25, 1930, the secretary of the Board of Medical Examiners wrote John Shepherd, asking for his medical credentials, but as yet has not been informed.

Dr. Arthur C. R. McCown, arrested in Oakland last Friday, charged with violating the State Medical Practice Act, was accused today of masquerading under false credentials as a physician. The accusation was made by Dr. Arthur C. McCown of St. Helens, Oregon, who was robbed in January 1928 of his University of Oregon Medical School diploma, a first lieutenant's commission in the Army, and narcotic requisition blanks. Doctor McCown believes the person apprehended here may be an impostor using his name, it was reported. Theft of the credentials from Doctor McCown was traced at the time to a man named Webb, who used the physician's office as a study. The arrest of Doctor McCown was made in Oakland last Friday night at 9200 A Street. He was taken immediately to San Francisco and obtained his freedom on \$500 bail. Complaint against Doctor McCown was made by Dr. William Agnew of San Francisco, who declared he had turned over his practice to the physician on representation that he was licensed in Oregon. Doctor Agnew, who was planning a trip to Europe, instructed Doctor McCown to obtain a reciprocity license from the State Medical Board entitling him to practice in this state, but discovered that he never made application, according to the complaint (Oakland *Tribune*, January 27, 1930). This individual is reported to have served as ship surgeon with the Alaska Packers' Fleet and made one trip as ship surgeon for a prominent steamship line running from New York to San Francisco.



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### TRUTH ABOUT MEDICINES

(Continued from Page 31)

sodium salicylate or of sodium iodid has been brought forward, and the objections to the fixed proportion mixtures apply to the mixtures listed in this report. Ampoule No. 50 Iron and Arsenic (Iron Cacodylate) is unacceptable because the name is nondescriptive; because recommendations for the routine intravenous use of iron are not warranted, and because iron cacodylate presents an irrational and useless method of the administration of iron and arsenic. The Council declared Ampoule No. 61 Sodium Salicylate 15½ grains, Ampoule No. 59 Sodium Iodid 15½ grains, Ampoule No. 66X Sodium Salicylate, Sodium Iodid 15½ grains each, Ampoule No. 66 Sodium Salicylate, Sodium Iodid and Colchicin, and Ampoule No. 50 Iron and Arsenic (Iron Cacodylate) one grain, unacceptable for New and Nonofficial Remedies because recommendations for the routine intravenous administration of sodium salicylate and sodium iodid are not warranted and because the administration of sodium salicylate and sodium iodid, of sodium salicylate, sodium iodid and colchicin in fixed proportion and of iron and arsenic in the form of ferric cacodylate whether intravenously or otherwise is irrational.—*Jour. A. M. A.*, January 4, 1930, p. 31.

**Excretion of Barbitol.**—Sir Maurice Craig holds that barbitol preparations may be taken for years without producing deleterious effects. This view has received some experimental verification. On the other hand, it has been held that in certain conditions—manic-depressive insanity, constitutional psychopathic inferiority and psychoneuroses—its use may lead to habit formation and that to such patients these drugs should never be administered.—*Jour. A. M. A.*, January 4, 1930, p. 35.

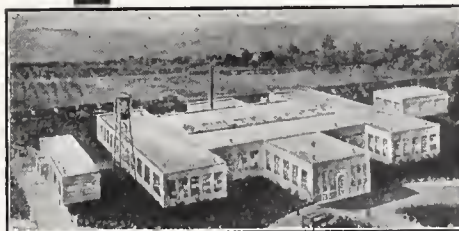
**More Misbranded Nostrums.**—The following products have been the subject of prosecution by the Food, (Continued on Next Page)

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**TRUTH ABOUT MEDICINES**

(Continued from Previous Page)

Drug, and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act: Yumco Tablets (The Yum Products Corporation) containing sodium salicylate, acetphenetidin (phenacetin), baking soda, phenolphthalein, a trace of alkaloids and a laxative plant drug extractive. Kelp-O-Lite (Pacific Kelp Products Company, Inc.), consisting essentially of aluminum sulphate and water, with traces of calcium, iron, potassium and sodium compounds, benzoic acid, and chlorids. Dakol Nasal Cream (New Haven Laboratories, Inc.), consisting essentially of petrolatum, with one-fourth of one per cent of chloramin T, volatile oils including menthol and a small amount of saponifiable fat. Sun and Moon Sacred Ointment and Sacred Herb Oil (A. W. Lowrie, Inc.), consisting essentially of a petrolatum and fatty acid base, with oils of sassafras, spearmint and wintergreen, while the herb oil consisted essentially of olive oil with oils of sassafras, spearmint, and wintergreen. Flumonia (Fuming) Salve (Van Vleet-Mansfield Drug Company) consisting of a petroleum jelly containing small amounts of menthol, camphor, and oil of eucalyptus. Mentho-Squillo (Mansfield Drug Company) consisting essentially of acetic acid, spirits of niter, menthol, a trace of red pepper, sugar, alcohol (6.8 per cent) and water. Chck-a-Cold Tablets (The Continental Drug Corporation) consisting essentially of acetanilid, red pepper, and aloes. U-Rub-It (U-Rub-It Chemical Company) consisting essentially of petrolatum and beeswax, with oils of eucalyptus, peppermint and sassafras, with menthol, oil of wintergreen and capsicum.—*Jour. A. M. A.*, January 4, 1930, p. 50.

**Viosterol Versus Cod-Liver Oil.**—Cod-liver oil and viosterol solutions are by no means to be regarded as therapeutically equivalent. Cod-liver oil cannot be replaced by the newer irradiated products except so



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far as the antirachitic factor vitamin D is concerned. Cod-liver oil is also a carrier of the indispensable vitamin A. Furthermore cod-liver oil contains digestible and assimilable fats.—*Jour. A. M. A.*, January 4, 1930, p. 53.

**Pituitary Solution (Squibb) One Cubic Centimeter, Five Units, and Pituitary Solution (Squibb) One Cubic Centimeter, Twenty Units, Not Acceptable for New and Nonofficial Remedies.**—E. R. Squibb & Sons market Pituitary Solution (Squibb) one cubic centimeter, five units, and Pituitary Solution (Squibb) one cubic centimeter, twenty units. The first product is one-half the strength of solution of pituitarium (United States Pharmacopeia), while the second is twice the strength. The Council holds that it is not in the interest of rational therapy to market strengths different from that of the standard pharmacopeial product and therefore cannot give recognition to such preparations. Accordingly, the Council declared these Squibb preparations unacceptable for New and Nonofficial Remedies.—*Jour. A. M. A.*, January 11, 1930, p. 105.

**Resuscitations and Intracardiac Injections.**—The power to revive the dead is one that the physician is often, but vainly, expected to exhibit. The alleged miracles of such revivals by injecting epinephrin into the heart are always widely reported in the newspapers. Physicians who have heard of these alleged resuscitations are tempted to employ the same means. If the death was real, no harm and no benefit results. Revival follows sometimes, perhaps not because of the treatment but in spite of it. In such cases there is indeed grave danger that serious injury may follow from the treatment that the patient has received. The evidence seems conclusive that, if the patient revives after such an intracardiac injection, he would have revived without it. Intracardiac injection is not a justifiable measure for resuscitation.—*Jour. A. M. A.*, January 11, 1930, p. 107.

(Continued on Page 41)

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### TRUTH ABOUT MEDICINES

(Continued from Page 39)

**Pancretone, Another Nostrum for Diabetes.**—The Wabash Chemical Company of Chicago exploits an alleged cure for diabetes called Pancretone. It also has as a side line a number of other nostrums, such as Digestoids, Laxalets, Intesoids, Pilene, Virillo, Asthmatol, and Myrol. Pancretone is advertised on the free trial treatment plan, common to diabetes cure quackery. According to the advertising for Pancretone, the diabetic who will take the preparation "requires no rigid diet regulation." He is told, however, that he must "not use Potatoes, White Bread, Sugar, Candy, Pie and Cake, Macaroni, Rice, Spaghetti and Beans, Dates, Figs, Bananas, Preserves and Jellies." The American Medical Association Chemical Laboratory examined a package of Pancretone consisting of tablets, and also a specimen of Laxalets and of Digestoids. From its examination, the laboratory concluded that "Pancretone" is essentially a "digestive tablet" containing an amyloplastic enzyme, to which has been added considerable calcium carbonate and cornstarch; that Laxalets are essentially a laxative combination, suggestive of aloin, belladonna, cascara, and strychnin; and that Digestoids are essentially a digestive combination suggestive of charcoal, baking soda, saccharated pepsin, pancreatin, and aromatics. It is obvious from the report of the analysis that any beneficial results that may follow the Pancretone "treatment" will be due to the rigid diet restrictions that are part of it. Any preparation that is so advertised as to induce diabetics to treat themselves without the advice of a physician is a menace. Pancretone belongs to this class!—*Jour. A. M. A.*, January 11, 1930, p. 124.

**Ergotamin Tartrate.**—The value of ergotamin tartrate in the treatment of migraine has not as yet been fully established. Recently good results have been reported from its use. A knowledge of the action of

(Continued on Page 46)

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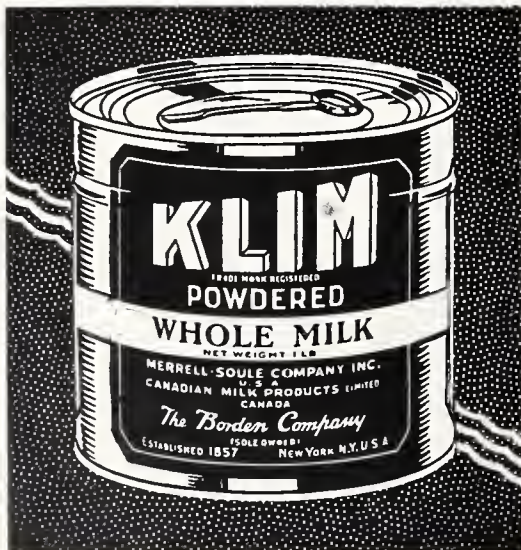
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A REPORT from the Department of Physiotherapy of a well-known New York hospital, dealing with diathermy in pneumonia and its sequelae, states as follows:

"As a rule diathermy is indicated in acute pneumonia, especially so when the symptoms are becoming or already are alarming: the temperature is high, the patient is delirious, the pulse is extremely rapid, cyanosis is deep, the respiration rate is high, the breathing is very shallow, and the cough remains unproductive. Not infrequently in a pneumonia case with such alarming symptoms, after a few diathermy treatments an entire change of the picture takes place: cyanosis lessens, respiration becomes deeper, the quality of pulse improves, the rate decreases, the

temperature is lowered, and the cough becomes productive. Auricular fibrillation that develops occasionally in similar pneumonias or other types of pneumonia where the toxemia is great, has been changed to a perfect normal rhythm after a few diathermy treatments."

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MISS MARY A. TAUTPHAUS, R.N., Superintendent

## TRUTH ABOUT MEDICINES

(Continued from Page 41)

the drug makes it easy to understand why the drug may help in some cases and more frequently fail to relieve. The drug is unfit for prolonged use because it may lead to gangrene and other symptoms of ergotism. According to New and Nonofficial Remedies, ergotamin tartrate is marketed under the name "Gynergen" by the Sandoz Chemical Works.—*Jour. A. M. A.*, January 11, 1930, p. 126.

**Phyllamin.**—According to the advertising of Menley & James, Ltd., Phyllamin is "A Delectable Concentrated Tonic Nutrient" and "Presents Fresh Summer Spinach Juice Cold Expressed." The preparation is claimed to contain "Chlorophyll and all the known five vitamin factors" and to represent "all the mineral salts of vegetables and fruits conserved in pure honey." As is the case with many proprietary preparations claimed to owe their value to the pres-

ence of vitamins, the advertising makes extreme claims for therapeutic qualities but contains nothing to indicate that determinations of the vitamin potency have actually been made. The preparation has not been accepted for New and Nonofficial Remedies.—*Jour. A. M. A.*, January 11, 1930, p. 127.

**"Common Cold" Vaccines.**—The nearest approach to a final proof that infections of the upper respiratory tract, usually grouped under the term "common cold" are due to an unknown filtrable virus has been made by Dochez and his coworkers. This unknown filter passer is not contained in any currently exploited "common cold vaccine."—*Jour. A. M. A.*, January 18, 1930, p. 189.

**Another Maurice Lundin Fraud.**—Maurice Lundin has been conducting a concern that he called the Bono Drug Company (and also Bono Company) in New York City and Jersey City, New Jersey. The postal authorities have just debarred the Bono Drug

(Continued on Page 48)



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### TRUTH ABOUT MEDICINES

(Continued from Page 46)

Company and the Bono Company from the use of the mails because of the fraudulence of the business. Under another name Lundin, according to the federal authorities, is also engaged in marketing a small pneumatic ring called the "Potentor" supposed to be worn around the scrotum and penis for the cure of impotence. The sale of this device by one Julius Saur, with whom Lundin was formerly associated, was the basis of a fraud order in 1928. Under still another name Lundin sells through the mails a device called the "Saddle," also sold as a cure for impotence; this was recently held obscene by the postal authorities. A few years ago a fraud order was issued against the Strong Chemical Company (another Lundin enterprise), which was selling a glass vacuum pump called the "Emperor Male Developer." Lundin's Bono Drug Company sold three products: (1) "French Pep Tablets," said to be a cure for impotence, sexual debility, inflammation and enlargement of the prostate, "kidney trouble," "bladder trouble," etc; (2) "French Pomade," which was a supplementary treatment to be used with the French Pep Tablets; and (3) "Bonol Balsam," which was supposed to grow hair on bald heads!—*Jour. A. M. A.*, January 18, 1930, p. 205.

**Mother Nature's Marvelous Powder.**—Mother Nature's Marvelous Powder, sometimes called Mother Nature's Marvelous Remedy and sometimes P. G. Powder, is put on the market by Nature's Mineral Remedy Company, which does business from a post-office box in Durango, Colorado. Nature's Mineral Remedy Company seems to be a trade name used by one W. C. Picking. More recently it appears that Picking has organized another concern known as the Colorado Natural Remedy Association of Denver. This also sells powdered rock (under the name "Kolorok") and it, too, is described as "Mother Nature's Powder." From the advertising it appears that the "Marvelous Powder" is good for whatever

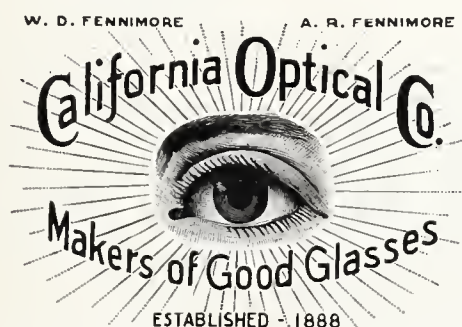


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ails you. From the analysis made in the American Medical Association Chemical Laboratory it appears that this product consists essentially of approximately 88 per cent of calcium sulphate (gypsum) and 10 per cent of calcium carbonate (chalk), containing probably a trace of calcium oxid (lime).—*Jour. A. M. A.*, January 18, 1930, p. 205.

**Armstrong's Oxycatalyst.**—No scientific evidence worthy of the name appeared to sustain the claims made for the Oxycatalyst, while there is increasing evidence that the exploitation of the product is much more concerned with economics than medicine. Two original ampoules of Armstrong's Oxycatalyst were examined in the American Medical Association Chemical Laboratory. The contents of the ampoules were found not to hasten the discharge of a charged electroscope, indicating that the product was not radioactive. The laboratory concluded that the specimens were non-radioactive preparations probably containing sodium chlorate, ferric chlorid, and sodium phosphate.—*Jour. A. M. A.*, January 18, 1930, p. 206.

**Multiple Nebulizer—Improved Acceptable.**—The Council on Physical Therapy reports that this apparatus has been found acceptable for inclusion in its list of accepted physical therapy apparatus. "The Multiple Nebulizer—Improved" (American Technical Laboratories, Glendale, California), is stated to be an apparatus that atomizes or nebulizes oils or other liquids. It is so constructed that any such medication can be administered alone or in combination with other medicaments without interruption of treatment.—*Jour. A. M. A.*, January 25, 1930, p. 265.

**Lukutate.**—This is another rejuvenating nostrum from the Orient via Germany. It seems to have run a somewhat hectic course in Germany. In due time its value was correctly appraised, and the Germans appear to have relegated it to the limbo of futile fakes. Today the Lukutate Corporation of America is trying to convince the people of these United States that

(Continued on Page 53)

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Reprinted from "California and Western Medicine," September, 1927.

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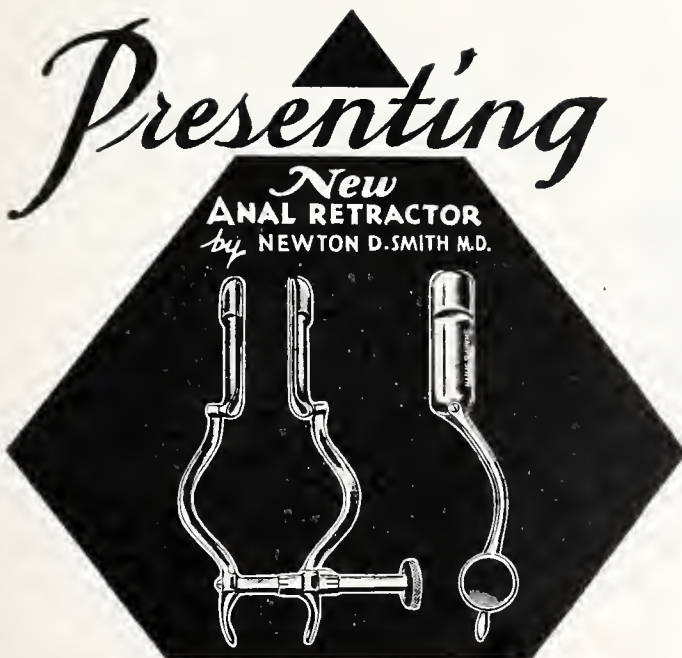
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### TRUTH ABOUT MEDICINES

(Continued from Page 49)

in Lukutate we have a rejuvenating substance of marvelous potentialities, but no definite information in regard to its composition is offered. It is stated that "The history of Lukutate is one of ancient lore and modern science, Oriental jungle and European laboratory" and that "The basic ingredients are certain Indian fruits. . . ." It is claimed that for hundreds of years these extraordinary fruits have been known to the natives and have been eagerly sought by tribes and even animals of all sorts. An aphrodisiac slant pervades the advertising. An imposing array of German and Austrian testimonials forms part of the "come on" advertising of Lukutate. However, articles in German medical and pharmaceutical journals indicate that physicians in that country are far from being as enthusiastic over Lukutate as the American public is led to believe. The results of official investigation of Lukutate in Austria were to the effect that the main ingredients were frangula (buckthorn) and cascara sagrada and that, therefore, the Lukutate products were to be regarded as medicinal preparations, and their sale seems to have been prohibited in Austria. In the United States testimonials for Lukutate seem, at present, to be much less imposing. The American Medical Association Chemical Laboratory examined specimens of Lukutate Tincture purchased from the Lukutate Corporation and found it to be essentially an aqueous-alcoholic solution of plant extractives, one of which is indicative of an emodin-bearing drug, such as cascara, senna, or buckthorn, and containing a small amount of fruit sugars (fructose).—*Jour. A. M. A.*, January 25, 1930, p. 281.

**Medical Publicity Bureau—A Correction.**—An article on the Medical Publicity Bureau was published in the *Journal American Medical Association*, December 7, 1929. The information given relative to the

(Continued on Next Page)

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## TRUTH ABOUT MEDICINES

(Continued from Previous Page)

personnel of the bureau was based on two reports—one furnished by the National Better Business Bureau and the other by the Department of Health of the City of New York. In the course of the article these statements appeared: "National Better Business Bureau reported . . . that Dr. James Macbeth and Dr. William J. Robinson were the principals. . . ." "The report further said that Dr. William J. Robinson of the *Critic and Guide* was the principal stockholder. . . ." Doctor Robinson has notified the *Journal American Medical Association* that "at no time has he been in any way whatever, directly or indirectly, closely or remotely, actively or passively, connected with the Medical Publicity Bureau" and that "at no time has he held any stock in said Medical Publicity Bureau."—*Jour. A. M. A.*, January 25, 1930, p. 282.

**Effects of Cinchophen.**—Purpuric, urticarial, or scarlatiniform eruptions have been reported by many observers following the administration of cinchophen. They may occur with or without edema. Gastrointestinal disturbances, from epigastric discomfort to acid eructations and heartburn, are the commonest expression of intolerance to cinchophen. These may be avoided by the giving of an abundance of water with the drug, and one gram of sodium bicarbonate, though the latter should be given separately and not mixed with the drug. By using neocinchophen, one may avoid usually the symptoms of gastric irritation. Sometimes cardiovascular disturbances have been noted. By far the most serious results of cinchophen intoxication result from injury to the liver, which may even go on to a fatal acute yellow atrophy.—*Jour. A. M. A.*, January 25, 1930, p. 283.

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merits are still under investigation. Cod-liver oil contains the valuable vitamin A in addition to vitamin D. Viosterol is of advantage because of the ease of administration and its concentration. Ultra-violet rays are undoubtedly a valuable therapeutic agent when under controlled supervision. Their effect on general nutrition and resistance as well as on the calcium retention is good. Their use, to the exclusion of vitamin D or viosterol, seems unwise. A combination seems most desirable when sunshine is not available.—*Jour. A. M. A.*, January 25, 1930, p. 283.

**Psittacosis in Upstate New York.**—Up to the date on which this issue went to press (January 22), ten cases of psittacosis or "parrot fever," definitely so considered on clinical and epidemiological evidence has been reported to the State Department of Health. Of this number two cases and one death occurred in Johnstown, two cases and one death in Yonkers, one case in Irvington, two cases in Hastings-on-Hudson, and three cases in Spring Valley. Information has been received regarding a number of other suspected cases, but the diagnoses have not been confirmed.

That the association of parrots with human cases is something more than mere coincidence seems borne out by the following considerations:

1. In each instance a parrot had recently been purchased, usually within two weeks of the onset of the first case in the household.

2. In each case the parrot was sick on arrival or became so within a few days.

3. In each of the recent instances, with one exception, the sick person had actually handled the sick parrot. In the one exception the patient denied actually handling the bird though she had been near it. Moreover this is the only one of the recent cases wherein infection through contact with a human case seems at all plausible.

4. In each case the human disease, though closely

(Continued on Next Page)

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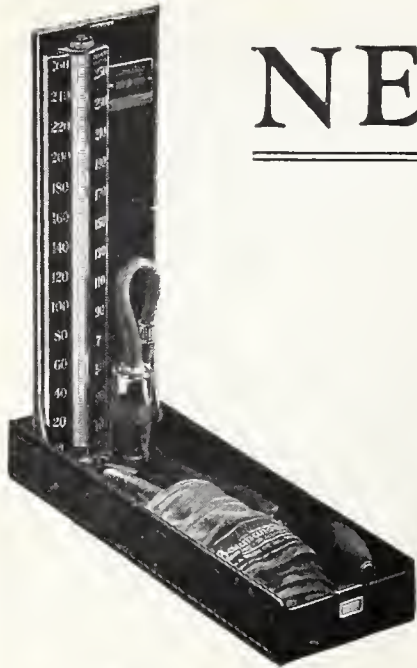
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(Continued from Previous Page)

resembling pneumonia, and especially influenza pneumonia, has differed from it in certain definite particulars. Briefly, these differences are a low respiratory rate (thirty or less) during the first week or more, despite a high fever and definite signs of pneumonia in the chest; an almost total absence of sputum; a low or normal number of white cells in the blood; a slow pulse relative to the temperature; and an absence of cyanosis or blueness of the lips, finger tips, face, etc.

No one of these peculiarities, nor all of them, would necessarily rule out a diagnosis of pneumonia or warrant a diagnosis of parrot fever. However, their occurrence in each of these cases thus far reported,

leads to the belief that they may be characteristic.

The disease in parrots is characterized by drooping, ruffling of the feathers, loss of appetite, more or less diarrhea, and a high mortality. Of the six parrots associated with the ten cases in upstate New York, four have died, one was killed while sick, and one still survives—in a laboratory.

Unless a parrot has been acquired recently or perhaps has been associated with a recently purchased parrot that has been sick, it is in no danger of acquiring the disease. New birds should be kept in their cages and not exposed to cold. There is some evidence that exposure precipitates the disease. They should be watched carefully for signs of illness.

(Continued on Page 59)



# APPROVED CLINICAL LABORATORIES

## Excerpts from American Medical Association Essentials for An Approved Clinical Laboratory

### Definition

*"\* \* \* A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body."*

*"Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved."*

*"The housing and equipment should be sufficient to permit all essential technical procedures to be properly carried out."*

### The Director

*"The director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry or other allied subjects, for at least three years. He must be a man of good standing in his profession."*

*"The director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work."*

*"The director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports."*

*"The director may have assistants, responsible to him. All their reports, bacteriologic, hematologic, biochemical, serologic and pathologic should be made to the director."*

### Records

*"Indexed records of all examinations should be kept. Every specimen submitted to the laboratory should have appended pertinent clinical data."*

### Publicity

*"Publicity of an approved laboratory should be directed only to physicians either through bulletins or through recognized technical journals, and should be limited to statements of fact, as the name, address, telephone number, names and titles of the director, and other responsible personnel, fields of work covered, office hours, directions for sending specimens, etc., and should not contain misleading statements. Only the names of those rendering regular service to the laboratory should appear on letter-heads or other form of publicity."*

### Fees

*"\* \* \* There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group. \* \* \*"*

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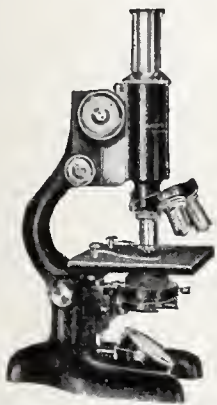
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(Continued from Page 56)

The hands should be washed thoroughly after handling the parrot or its cage. Mouth to mouth feeding should not be practiced. Foolish at any time, it is foolhardy now.

If an old bird becomes sick, unless recently exposed to a new one, it probably has something *not* infectious to human beings and can be treated at home with reasonable safety.

If a new bird becomes sick it is dangerous. By exercising great care it may be possible to nurse it back to health without becoming infected. No one knows just what the chances are, but the risk seems hardly warranted.

The germ that causes the disease is not definitely known. The so-called psittacosis bacillus has not been found in any of the recent human cases nor thus far

in any of the parrots associated with them. Further laboratory work is therefore highly important. Health officers are asked to bear this in mind when cases of psittacosis occur in their districts.—*Health News*, January 27, 1930.

**Vaccination.**—United States Public Health Report, November 22, 1929. Due to the compulsory vaccination law in Germany and the service rendered the public in its enforcement, smallpox is unknown in that country. In 1926 seven imported cases were reported for all Germany; in 1927 four imported cases were reported; while in 1928 only two cases, both imported, were recorded for the entire nation. Such a record as this is the natural result of universal vaccination and an example of what can be accomplished by the people of any country who consider the prevention of smallpox seriously.—*The Health Messenger* (Seattle).



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**Anesthetic Found Successful.**—Following a study of human and animal reactions to a new anesthetic, amytal, recently adopted by some hospitals for surgical work, two members of the department of physiology of the University of California have succeeded in showing why this hypnotic has been a success in selected cases.

The work was done by Dr. J. M. D. Olmsted, chairman of the department of physiology, and George M. Giragossiantz, graduate student, during the course of the past year.

Amytal, they explained, is a compound of barbituric acid closely related to a number of well-known sleeping potions. It is injected into the veins of the patient in place of being given by inhalation as a gas. The chief point advanced in its favor was its lack of effect upon the internal workings of the body, and particularly the freedom from nausea of patients coming out of it.

Doctors Olmsted and Giragossiantz found that amytal does not raise the blood sugar of the body and produce a diabetic condition simply because it arrests action of the liver in which sugar is stored as glycogen, and no action occurs while the body is anesthetized. It also prevents passage of sugar from the stomach into the intestine and probably arrests, temporarily, other bodily functions.

This discovery that amytal leaves the body normal because it stops all action, temporarily, does not interfere with its use in selected surgical cases, but it may have some significance to research men who have used amytal in experiments without knowing why it anesthetized without altering normal conditions following recovery from the anesthesia.—*University of California Clip Sheet.*



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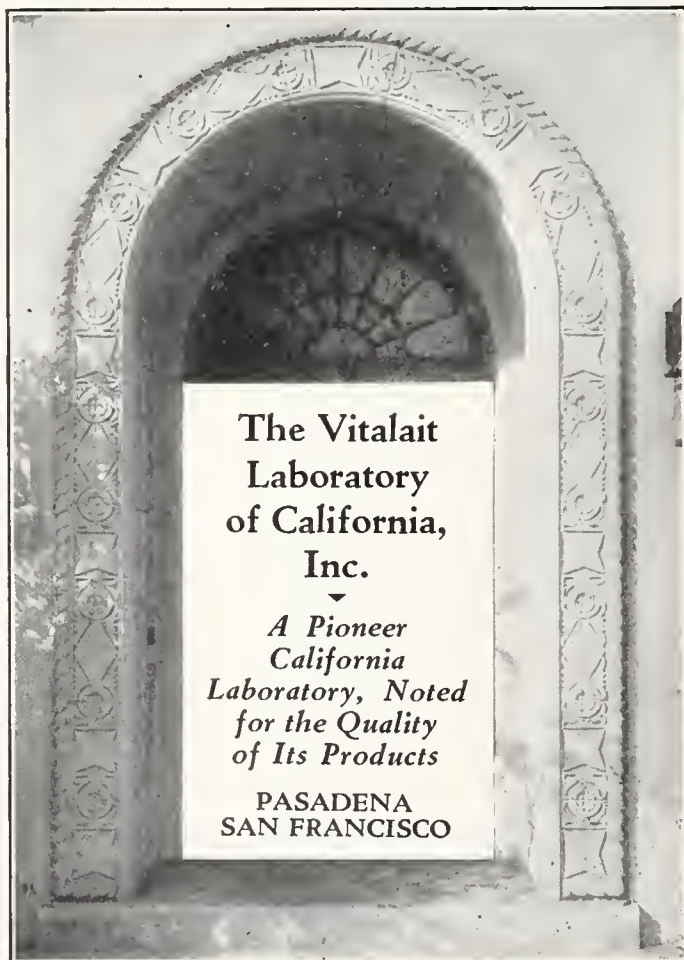
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**Animal Diseases that Occur in Man.**—Monkeys have many diseases that occur in man and on this account they are more and more becoming objects of scientific study in public health laboratories, but public health investigators have heretofore lacked a convenient classification which would assist authors in the identification of these mammals and their diseases, such as is presented in this bulletin.

With the increasing knowledge of the diseases which can develop in monkeys, questions of public health importance arise in regard to the potential rôle of the menagerie, the circus, and the zoo in spreading diseases to man. Hygienic Laboratory Bulletin 152 gives the desired information in regard to the apes, monkeys, and lemurs, for under each animal cited there is a list of its parasitic diseases, and in the introduction under the name of each parasite there is a list of all the apes, monkeys, and lemurs for which each particular parasite has been reported and a notation whether the parasite is transmissible to man.

It is interesting to note that two of the hookworms reported for man are reported for apes also, and that two infections ("tongue worms") which man contracts from snakes are very widespread among the apes and monkeys.—*United States Public Health Service.*

**Germany's Inns for Young Hikers.**—A large number of inexpensive inns have been opened in Germany to shelter the enormous number of school boys and girls who go on long walking tours. These inns are maintained chiefly by public funds, but are managed by the clubs of young people that make use of them. So popular has hiking become in Germany that about 3,500,000 school children were accommodated in these shelters during 1928.—*United States Department of Labor Children's Bureau.*



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△ . . . . .	0.56-0.61	0.56***
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- per 100 c. c. . . . .	68.0	68.0
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\* Average per cent according to Halt, "American Journal Diseases of Children," Vol. 10, page 239, 1915.

\*\* Davidsahn, H.—Ueber die Reaktion der Frauenmilch, Zeitsch. für Kindern., Vol. 9, 1913, page 15.

\*\*\* Fridenthal, H.—Ueber die Eigenschaften kuenstlicher Milchsera und ueber die Herstellung eines kuenstlichen Menschenmilchersatzes. Zentralb. f. Physiol., Vol. 24, 1910, 687.

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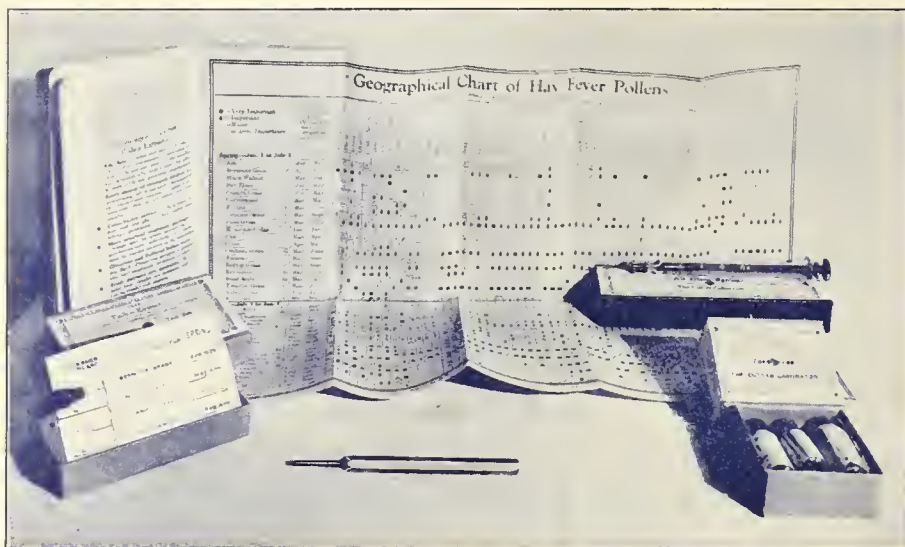
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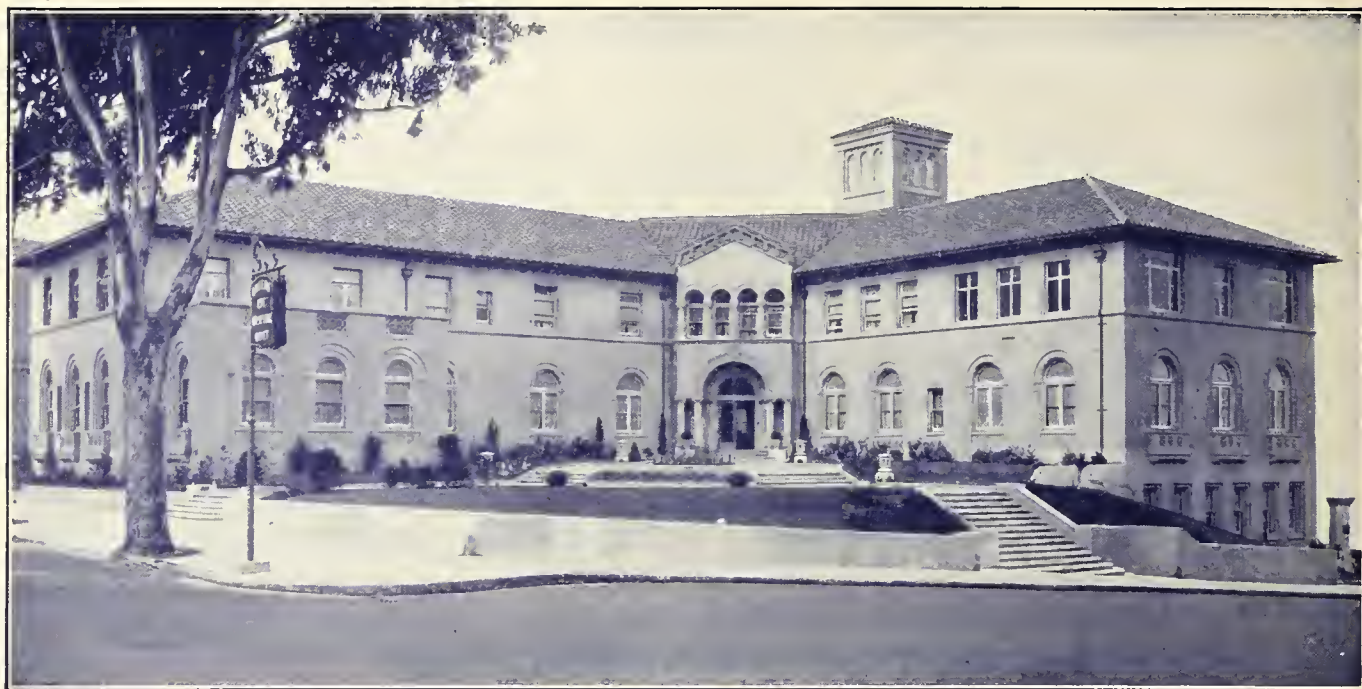
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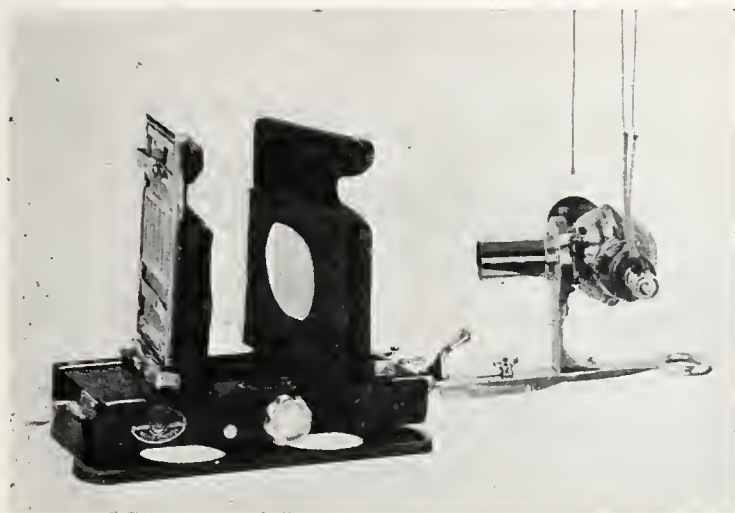
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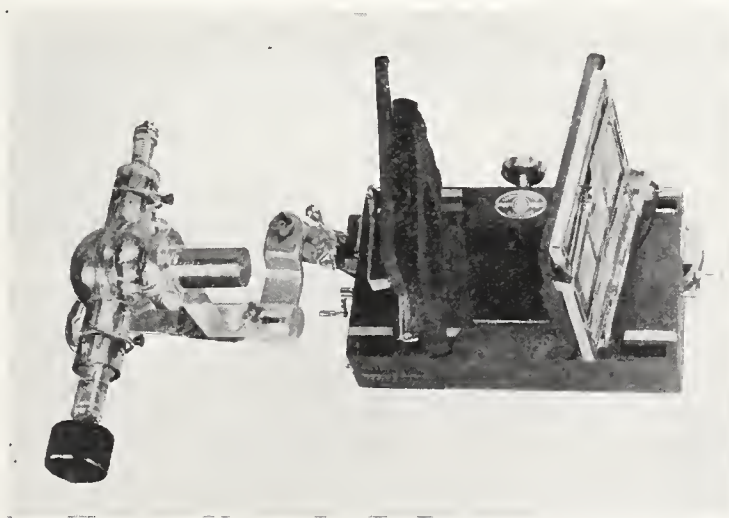
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**Radio Quacks.**—In the ordinary course of its work  
the Department of Health has recently uncovered  
what is believed to be a serious situation and which  
seems to indicate that the radio is being fairly widely  
used by companies alleging to cure diseases through  
the sale of various products and services. These  
claims are, in many of the cases we have investi-  
gated, completely unfounded, fraudulent and inimical  
to the public health. The Department is powerless,  
under the law, to protect the public against these  
charlatans. The Commissioner has, therefore, called  
this menace to the attention of the Federal Radio  
Commission. Since any form of radio censorship  
would be obnoxious to our ideals and dangerous, a  
conference has been called of the forty-six radio  
broadcasters within the immediate vicinity of New  
York and it has been suggested that all radio health  
programs be voluntarily submitted to the scrutiny  
of a joint committee of the medical societies. It is  
believed this will accomplish, in a voluntary way,  
what under the present laws seems impossible to do.

An invitation has also been extended to the Na-  
tional Better Business Bureau, the American As-  
sociation of Advertising Agencies, the National As-  
sociation of Broadcasters, the federal and state authori-  
ties interested in this work, to formulate a code of  
broadcasting ethics. While this is broader than our  
immediate interests, it is the only manner in which  
those who have studied this question believe it will  
be possible to drive the medical quack off the air.  
In this campaign to drive out the radio medical quack  
the Health Department is giving leadership to a  
movement which has already attracted nation-wide  
attention and is receiving the serious consideration it  
deserves.—*Weekly Bulletin City of New York Depart-*  
*ment of Health, January 11, 1930.*



## BOOK REVIEWS

List of Books Received

### BOOKS RECEIVED

**Insomnia.** How to Combat It. By Joseph Collins, M. D. Cloth. Pp. 130. Price, \$1.50. New York: D. Appleton and Company, 1930.

**The Baby's First Two Years.** By Richard M. Smith, A. M., M. D., Assistant Professor of Child Hygiene, Harvard Medical School and School of Public Health, Boston. Cloth. Pp. 159, with illustrations. New and revised edition. Price, \$1.75. Boston and New York; Houghton Mifflin Company, 1930.

**Roentgenographic Technique.** A Manual for Physicians, Students and Technicians. By Darnon Artelle Rhinehart, A. M., M. D., Professor of Roentgenology and Applied Anatomy, School of Medicine, University of Arkansas. Cloth. Pp. 388, with 159 illustrations. Price, \$5.50 net. Philadelphia: Lea & Febiger, 1930.

**Recent Advances in Preventive Medicine.** By J. F. C. Haslam, M. C., M. D., Assistant Director, Bureau of Hygiene and Tropical Diseases; Director of Library Services, London School of Hygiene and Tropical Medicine. With a chapter on the Vitamins by S. J. Cowell, M. D., M. B., Professor of Dietetics in the University of London. Cloth. Pp. 328, with 30 illustrations. Price, \$3.50 net. Philadelphia: P. Blakiston's Son & Co., Inc., 1930.

**Surgical Diagnosis.** By 42 American authors. Edited by Evarts A. Graham, M. D., Professor of Surgery, Washington University Medical School. Three octavo volumes, totalling 2750 pages, containing 1250 illustrations, and Separate Index Volume. Cloth. Price, \$35 a set. Philadelphia: W. B. Saunders Company, 1930.

**Mortality Statistics 1927.** Twenty-eighth Annual Report. Part I. United States Department of Commerce, Bureau of the Census. Summary and Rate Tables and General Tables for the Death Registration Area in Continental United States, with Supplemental Statistics for Hawaii and the Virgin Islands. Cloth. Price, \$2. Washington: United States Government Printing Office, 1929.

**The Bacteriophage and Its Clinical Applications.** By F. d'Herelle, Professor of Bacteriology Yale University School of Medicine. Translated by George H. Smith, Professor of Immunology, Yale University School of Medicine. Cloth. Pp. 254. Price, \$4 postpaid. Springfield: Charles C. Thomas, 1930.

**Bulletin of the National Research Council.** Number 73. A Survey of the Law Concerning Dead Human Bodies. By George H. Weinmann, LL. B., Attorney and Counselor at Law. Issued under the auspices of the Committee on Medico-legal Problems, National Research Council. Paper. Pp. 199. Washington, D. C.: The National Research Council of The National Academy of Sciences, 1929.

### BOOK REVIEWS

**Sterilization for Human Betterment: A Summary of Results of Six Thousand Operations in California, 1909-1929.** A publication of the Human Betterment Foundation. By E. S. Gosney and Paul Popenoe. Pp. 202. New York: The Macmillan Company, 1929. Price \$2.

This volume one of the publications of the Human Betterment Foundation, which was founded in 1929 by E. S. Gosney, may be regarded as a résumé of the numerous papers which the authors have published in the last few years. In the earlier chapters there is a short history of the subject and the following chapters are devoted to the effects on sexual life, the viewpoints of patients who have been operated upon, the effect on the patient's behavior, and a refutation of the idea that sterilization might prevent the birth of occasional geniuses.

Although twenty-two states have at one time or another passed laws legitimizing sterilization of criminals, feeble-minded and the insane, of 8515 operations performed in the United States up to January 1, 1928, 5820 were done in California. Other states which have done considerable numbers are Kansas, 647, and Oregon, 511. Indiana, which was one of the pioneers, has done no operations since 1909 and New York has done none since 1918. In 1926, the United States Supreme Court upheld the constitutionality of the Virginia law and Justice O. W. Holmes in writing the opinion said that

(Continued on Next Page)



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### BOOK REVIEWS

(Continued from Preceding Page)

"three generations of imbeciles were enough." Many who have no religious or sentimental objections are still unconvinced that the desired results are being obtained by the operation. The number of operations alone might lead to false conclusions. Sterilizing 5000 chronic insane or hopelessly feeble-minded who are destined to spend the rest of their lives in institutions is useless. What might help would be sterilizing those discharged from institutions who go back into the world where, if unsterilized, they might reproduce.

E. W. T.

**The Nose, Throat and Ear.** By John F. Barnhill. Pp. 604. Illustrated. New York and London: D. Appleton and Company, 1928.

Barnhill's book is a very well rounded work in ear, nose and throat. It is pretty well up to date and the relation between general medicine and the specialty is kept in mind all the way through.

Anatomy is not given very much in detail, but is given so that it is very easy to understand. The practical anatomy of the pharynx is especially well given.

We find that it is quite true, as Barnhill states, that the term adenoid has come to mean hypertrophied adenoid. He deals with the question of tonsillectomy in an open-minded manner, realizing that there is a great deal of disagreement on this subject. One important point brought out about tonsillectomy is the fact that most of the large tonsillar vessels are found in the loose connective tissue in the tonsillar fossae; if, in doing a tonsillectomy, one does not invade this area, very little bleeding is encountered.

A very good chapter found in this book, which is usually not found in such text, is the chapter on climate. Also the chapter on headaches is excellent.

Laryngitis in children is not given as we see it in this part of the country. He does not give the usual steps in paralysis of the larynx such as is given in most books. He gives a good general idea of laryngoscopy, bronchoscopy and esophagoscopy, but of course not as it is given in Jackson's work. The chapter on life insurance is very interesting.

There are two mistakes noted—one on page 203 where there is a misprint, the word "chemical" should be "clinical." On page 445 the author states that *Staphylococcus pyogenes aureus* is a bacillus.

It might be of interest to state that while in London this summer, I noticed that this book was fairly popular in its sale at the medical book stores.

A. G. R.

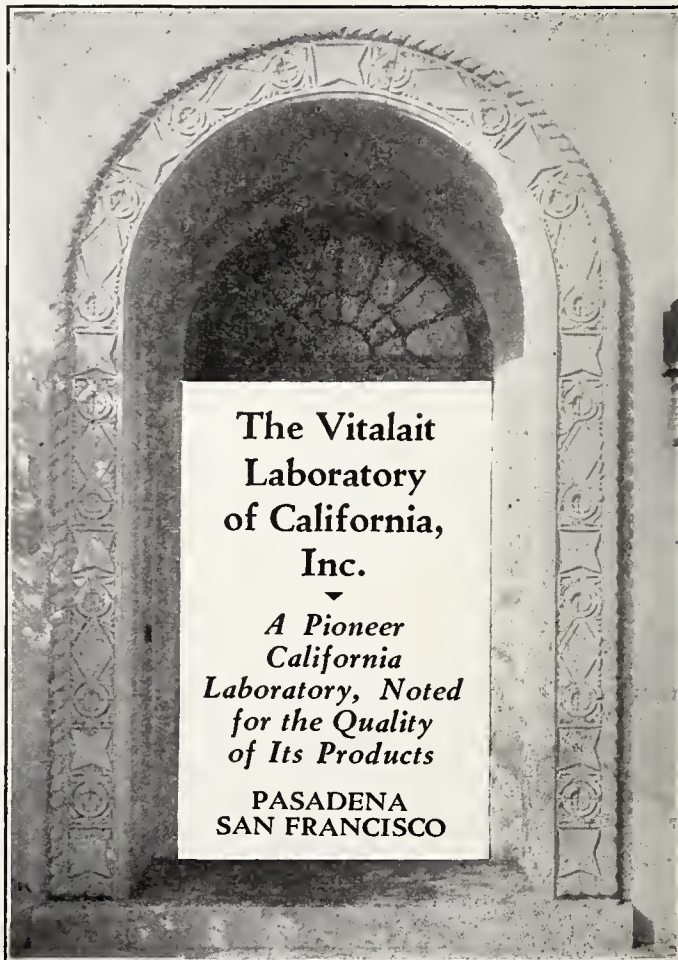
**The Challenge of Chronic Diseases.** By Ernst P. Boas and Nicholas Michelson. Pp. 197. New York: The Macmillan Company, 1929. Price \$2.50.

The authors of this important little presentation enjoy a position of authority in discussing the subject of the disposition, care and treatment of patients incapacitated by chronic disease. Doctor Boas, as the attending physician to the Montefiore Hospital for Chronic Disease in

New York, has been an ardent student and active contributor to the literature pertaining to all phases of this problem for the past decade.

"The scope of the problem," he says, "is indicated by the many different types of institutions which at present serve as refuges for chronic patients—homes for incur-

(Continued on Page 14)



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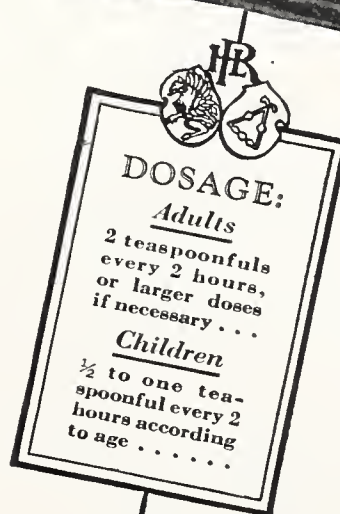
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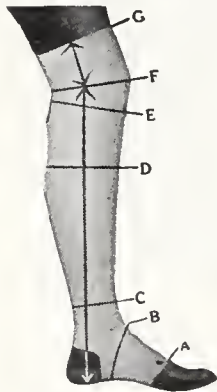
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## BOOK REVIEWS

(Continued from Page 12)

ables, almshouses, city infirmaries, homes for the aged and infirm. They all minister to the same class of individuals, but hardly one of these institutions has made a study of the medical needs of the inmates in an attempt to fill its patent obligations. The individual suffering from a chronic ailment is preëminently an institutional charge, for whom in only the rarest instances the proper facilities have been provided."

Having stressed the important medical aspects of chronic disease and pointed out the widespread indifference in this country to this class of patients, the authors present a comprehensive plan comprising the following units—administration, service, employees, hospital and custodial, which offers valuable principles and suggestions in the construction of a modern, well equipped institution for the care and study of chronic disease. This is followed by a section on the medical organization of such an institution and many pertinent and significant observations are marshalled. For example, to make the work in a chronic hospital attractive to the medical staff it is suggested that each physician be given a comparatively large service so that the greater number of beds compensates in part for the slow turnover of patients. The most important measure, however, which will be sure to build up a strong medical staff is the provision of adequate resources for complete diagnostic study and investigation. This I can heartily agree with, since it is my opinion that nothing stifles the alert physician's interest more than inadequate facilities for the most complete and exhaustive work-up of unusual cases.

Because the material of this book comes from the personal experience of the authors it is convincing and certainly deserves the careful consideration not only of the medical profession but also of the many social, economic and other communal forces which have to do with the problem of the disposition of chronic medical diseases.

E. S. duB.

**Material Medica and Therapeutics Including Pharmacy and Pharmacology.** By Reynold Webb Wilcox. Twelfth edition. Pp. 690. Philadelphia: P. Blakiston's Son & Co., Inc., 1929.

This twelfth edition of a recognized standard textbook has been carefully revised and brought up to date. The author still displays his qualities of a good teacher, as well as his intimate knowledge of the practical needs

(Continued on Page 16)





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## BOOK REVIEWS

(Continued from Page 14)

of the physician. This new edition maintains its practical values in being very complete as well as concise. The arrangement of the book should also be appreciated; it seems admirably suited for a quick reference, and one cannot help but be relieved at not seeing lists of occasionally used or possible drugs for various symptoms and conditions. Each drug is adequately described in its physical and physiological properties. The clinical uses, as described in the second part of the book, make one feel that for very little effort a very complete information is obtained. The index of symptoms adds materially to the value as a quick reference without confusion. The book is suited as a good text for the student, who having become familiar with its arrangement can ever have, close at hand, the necessary knowledge of practically all the drugs now used in the practice of medicine.

E. C. T.

**Pettibone's Textbook of Physiological Chemistry.** (With Experiments.) By J. F. McClendon. Pp. 368. Fourth edition. St. Louis: The C. V. Mosby Company, 1929. Price \$3.75.

It frequently happens that the busy physician, several years removed from his medical school training, desires a rapid survey of the current ideas on various phases of the medical sciences. The large detailed texts on these subjects usually are too formidable for him. There is, however, a real need for a series of condensed but authoritative works covering the significant points of view in the medical sciences for the purpose of affording rapid review to the average practitioner.

In the field of physiological chemistry, McClendon's revision of Pettibone's text affords an excellent example of such an effort. Two-thirds of the book are concerned with a general consideration of current viewpoints in physiological chemistry while the latter portion of the book is concerned with laboratory work and a well selected set of references to standard authorities. Designed as an introduction to physiological chemistry for medical students, the book gives an excellent survey of the field for the physician as well. Advance in biochemistry has been so rapid that unless an individual keeps in constant touch as a specialist with the literature in the field, he quickly falls far out of touch with the important practical developments which may be used daily in the clinic.

The discussion of the significant aspects of physical chemistry for biological application is extremely simple and well arranged. The chief types of foodstuffs are quite well discussed and there is then a systematic discussion of digestion, absorption, excretion and general metabolism. The work is by no means a complete survey of the field nor is it designed to be. For the student it is a stimulating work raising many questions which would be sure to excite his interest, and for the practicing physician it is an excellent summary, very briefly and simply presented, of a field that frequently is considered more difficult to understand than it really is.

C. D. L.

**Modern Methods of Treatment.** By Logan Clendening. Third edition. Pp. 815. Illustrated. St. Louis: C. V. Mosby Company, 1929. Price \$10.

Tremendous is the task Clendening cut out for himself and yet he has performed it excellently. The book is a mine of information and almost completely fulfills the

(Continued on Page 18)





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### BOOK REVIEWS

(Continued from Page 16)

author's promise "to furnish an outline of all the methods of treatment used in internal medicine."

This he does in no desultory fashion. Details of diet, hydrotherapy, procedures such as lumbar puncture, thoracentesis and the like, are given with meticulous care. The reviewer considers the volume a most valuable addition to the shelf of any practitioner or any senior medical student. Just to fulfill one of the functions of a reviewer, i. e., to find something at which to cavil, we wish that in discussing the treatment of angina pectoris, the author had made some mention of the surgical procedures which have attained some importance.

H. W.

**Hookworm Disease: Its Distribution, Biology, Epidemiology, Diagnosis, Treatment and Control.** By Asa C. Chandler. Pp. 476. Illustrated. New York: The Macmillan Company, 1929.

Professor Chandler condenses into 476 well written pages, a complete and up-to-date description of hookworm disease, with very adequate bibliography and appendices. The material is logically assembled, splen-

didly edited and the volume is written in the usual clear and pleasant style of this author. The thing which gives particular value is the fact that the author spent three years in India, doing intensive work on hookworm disease. These extended personal studies in a foreign hot-bed of hookworm infection lend an authority to the opinions and recommendations which is not to be found under any other conditions. The practical value of the book is therefore very great.

Every physician in whose practice hookworm disease may be expected to occur, and of course every teacher and worker in general parasitology, will be well advised to find a place for this volume on his bookshelf.

A. C. R.

**Posture and Hygiene of the Feet.** By Philip Lewin. (The National Health Series, edited by The National Health Council.) Pp. 47. Illustrated. New York and London: Funk and Wagnalls Company, 1929.

This book is written by one well qualified because of his vast experience. It is written for the layman. The text is in clear and simple English, the illustrations are clear and there are enough of them. Arrangement is excellent, starting with the hygiene of the feet, the care, shoeing, and ending with a discussion of abnormalities.



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The chapter on flat feet is excellent and by far the best in the book.

The only possible criticism is the occasional use of technical terms without sufficient explanation, i. e., the shank of the shoe. (Terms that should be familiar to all laymen, but so often are not.) An excellent book for the general public.

R. L. D.



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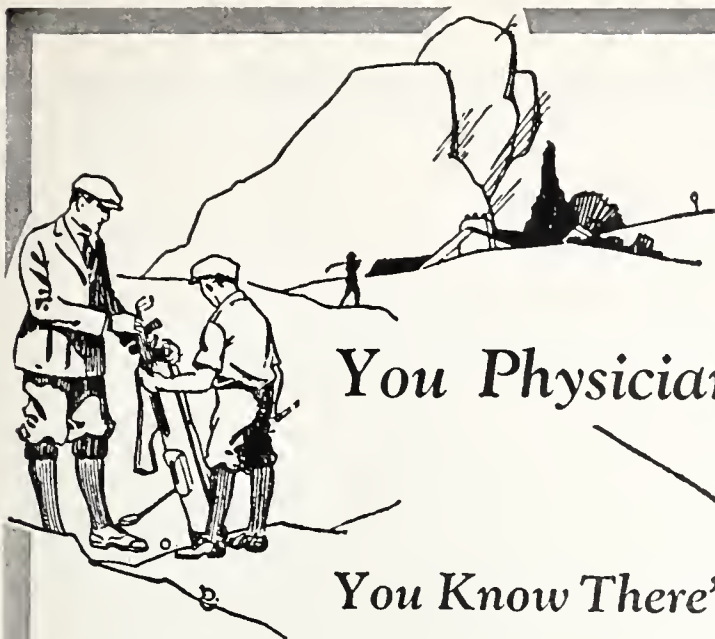
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**Robert McNeil.**—Tincture Digitalis Duo-Test (McNeil); Black Capsules, Digitalis Duo-Test (McNeil).

**Mead's Viosterol in Oil One Hundred D.**—A brand of viosterol in oil 100 D, New and Nonofficial Remedies (*Jour. A. M. A.*, August 31, 1929, p. 693). Mead Johnson & Company, Evansville, Indiana.

**Lenigallol-Zinc Ointment.**—It contains lenigallol (*Jour. A. M. A.*, April 6, 1929, p. 1181), six per cent in a base composed of zinc oxid ointment—United States Pharmacopeia. E. Bilhuber, Inc., New York.

**Typho-Serobacterin—Mulford (Sensitized Typhoid Vaccine) (New and Nonofficial Remedies, 1929, p. 384).**—This product is also marketed in packages of three syringes, being three immunizing doses. H. K. Mulford Company, Philadelphia.—*Jour. A. M. A.*, February 1, 1930, p. 339.

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(Continued on Page 26)

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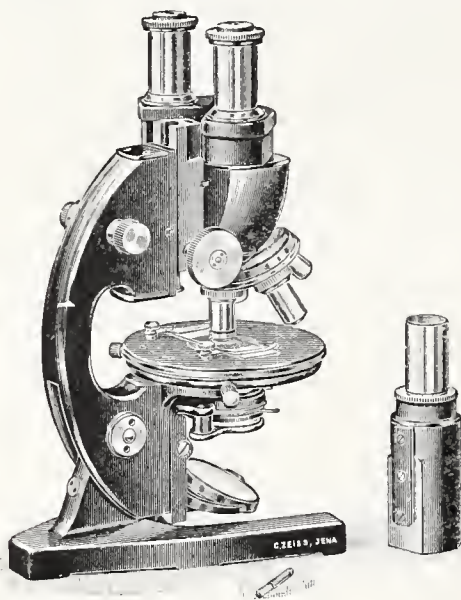
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(Continued from Page 23)

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(Continued on Page 28)



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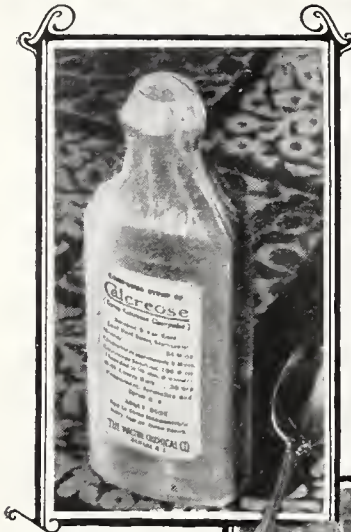
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## TRUTH ABOUT MEDICINES

(Continued from Page 26)

milk-containing macaroni that cooks in five minutes instead of twenty.—*Journal A. M. A.*, February 8, 1930, p. 411.

**Borden's Evaporated Milk** (The Borden Company, New York City).—It has the following average composition: fat, 7.85 per cent; protein, 6.88 per cent; carbohydrates, 9.67 per cent; ash, 1.55 per cent; total solids, 25.95 per cent; water, 74.05 per cent. The product is manufactured from whole milk. Borden's Evaporated Milk is advertised for infant feeding and for household use in making milk convenient for cooking. It is claimed that the milk is clean and sterile; that it resembles breast milk in ease of digestion; and that it produces fine flocculent curds.

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**Gerber's Strained Vegetable Products** (Gerber Products Division, Fremont Canning Company, Fremont, Michigan).—Brands: Gerber's Strained Spinach, Strained Carrots, Strained Green Beans, Strained Peas, Strained Prunes, Strained Tomatoes, and Strained Vegetable Soup. Specially selected vegetables, steam-pressure cooked and sterilized at high temperature. It is claimed that by excluding air and cooking under steam pressure without water a greater conservation of mineral salts and vitamin elements is effected.

**The New Pettijohn's** (The Quaker Oats Company, Chicago).—This product consists of the whole wheat grain. It is obtained by steaming and flaking wheat which has a tender bran, the bran being included in



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**Muffets (Irradiated)** (Quaker Oats Company, Chicago).—Whole wheat, cooked, crushed, drawn out to filmy ribbon of wheaten threads. Wound round and round, baked and toasted. Muffets (Irradiated) makes vitamin D available in a breakfast food for all ages except infants. It is not intended as a therapeutic agent to supplant cod-liver oil.

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**Quaker Milk Spaghetti** (The Quaker Oats Company, Chicago).—The product is made from whole milk and wheat.—*Jour. A. M. A.*, February 22, 1930, p. 559.

## PROPAGANDA FOR REFORM

**Hernial (Inyecciones Proliferantes Obturadoras del Dr. E. Pina Mestre) Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that the product "Inyecciones Proliferantes Obturadoras," stated to be manufac-

(Continued on Next Page)



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## TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

tured by Dr. E. Pina Mestre of Barcelona, Spain, was presented to the Council for consideration under the name "Hernial" by the Vincent Ruiz Company, New York. According to the information submitted by this firm, "Each ampoule contains approximately 98 per cent of alcohol, and the balance consists of the following ingredients expressed in percentages: 25 per cent Krameria, 16 per cent Katechu, 15 per cent Rosa Canina, 15 per cent Rosa Centifolia, 14 per cent Vaccinium Myrtillus, 15 per cent Monesia." The preparation is proposed for use by injection in the treatment of hernia. The Council declared Hernial (Inyecciones Proliferantes Obturadoras del Dr. E. Pina Mestre) unacceptable for New and Non-official Remedies because it is an unscientific, indefinite and complex mixture of astringent drugs proposed for use in the treatment of hernia, for which unwarranted claims are advanced and the use of which is not warranted by the available evidence but, on the contrary, is considered to be dangerous.—*Jour. A. M. A.*, February 1, 1930, p. 339.

**Pinnecksin Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that "Pinnecksin," according to the label, is a "Laxative" and "Stomachic" and that, according to International Food Products, Inc., the importers of the preparation, "The originator of this medicine claims for same according to original recommendations said to be in his personal possession and given by some of the foremost liver and stomach specialists of Germany, that this medicine of his would without doubt cause a thorough elimination of gall stones without a surgical operation; he furthermore claims that his medicine would prove of great benefit in the treatment of most any sort of intestinal ailment outside of cancer or ulcer." The importer states that the preparation is a compound of extracts of



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"thirty-two roots and herbs." The Council found Pinnecksin unacceptable for New and Nonofficial Remedies because it is a complex mixture representing aromatic, bitter and cathartic drugs in undeclared amounts which is offered under a noninforming name, with unwarranted therapeutic claims which may lead to its ill advised and harmful use by the public.—*Jour. A. M. A.*, February 1, 1930, p. 339.

**The Female Sex Hormone.**—At the thirteenth International Congress of Physiology in Boston, held in August 1929, E. A. Doisy announced for the first time the isolation of the female sex hormone in crystalline form. Subsequently, A. Butenandt announced that he, too, had isolated the hormone of the female sex glands in chemically pure crystallized form. In an article describing the product, Butenandt completely ignores the Doisy announcement. Butenandt points out that the substance is free from nitrogen and sulphur, and that it has no connection with protein substances and carbohydrates. In his opinion, a chemical analysis may make it possible to produce the hormone synthetically. As might have been anticipated, the German investigator promptly conferred on his product a trade name controlled through a German manufacturer. Doisy, aided by the Council on Pharmacy and Chemistry, will no doubt choose a scientific name suitable to the nature of the product and to American conditions.—*Jour. A. M. A.*, February 1, 1930, p. 341.

**New Treatments for Cancer.**—In a letter Walter B. Coffey and John D. Humber outline their work in connection with an experimental method of treating cancer which involves the injection of extracts of the suprarenal cortex. The work is in the earliest of experimental stages and hardly sufficient on which to base definite claims. The claims of Doctors Coffey

(Continued on Page 35)



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# CALIFORNIA AND WESTERN MEDICINE

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## THOUGHTS ON ANGINA PECTORIS\*

By W. S. THAYER, M. D.  
*Baltimore, Maryland*

HIGH or low, rich or poor, monarchists, republicans or communists, we poor human beings labour alike under the tyranny of words. To most of us, to a greater or less extent, certain terms, certain names, certain adjectives, the moment they are uttered, evoke pictures in our minds sometimes agreeable, sometimes repulsive, sometimes menacing, of such vividness and intensity that the words themselves, ambiguous though they may be, become to us in a sense entities. Such words, such phrases, may have an appalling influence on human action.

In medicine it is as in life in general. The influence of a mere clinical term may sometimes be considerable. Such a term, while it may describe but a group of clinical symptoms varying in physiological, anatomical or pathological import, comes to be regarded not only by the laity but too often by the profession, as such an entity. The mere term becomes, in our mind's eye, almost a living thing. Alas, to too many of us the essence is of less significance than the name. We are all more or less like the good woman who greeted my dear old master after a lecture on astronomy, and, congratulating him on his fascinating remarks, said: "But the most extraordinary thing, Mr. C., that which I can't understand, is how you discovered the names of the stars!"

### POPULAR SIGNIFICANCE OF TERM "ANGINA PECTORIS"

"Angina pectoris"—what a picture these words evoke in the mind of the average man!—a picture of hopelessness, of agonizing suffering, of the constant menace of sudden death; a vague, indefinite apprehension of one of the most terrible fates imaginable. One of our vital duties as physicians is to deliver our patients from bondage such as that under which they labour, subjects to the tyranny of words such as these.

Not infrequently a patient in my consulting room says: "Doctor, is this angina pectoris?" In response I usually laugh and say: "Yes, if you will, it is 'angina pectoris.' But what is 'angina pectoris'?" It is many things from a mere warning that you are growing older and that you mustn't be quite so active as you were twenty-five

years ago—it is many things from this up to a really distressing and painful disease." And then I endeavour to enlarge upon this suggestion, pointing out to the patient the more hopeful side of the picture and dwelling upon the general management of his life until, usually, he leaves me calmed, encouraged, hopeful and ready, in so far as he is able to control himself, to lead the life that he ought to lead.

As a matter of fact "angina pectoris," as we use the words, is a term describing certain symptoms associated with cardiac and aortic disease—a syndrome which in itself varies widely in its manifestations and in its clinical course and prognosis. The anatomical alterations which are found post-mortem are generally associated with evidences of changes in the cardiac circulation and are, in my experience, less commonly due to aortic lesions other than those interfering with the coronary circulation than some of the modern literature would lead one to fancy.

### WHAT DO WE MEAN BY "ANGINA PECTORIS"?

What do we generally include under the picture of angina or anginoid manifestations?

In a rough general way I should say:

1. Substernal pains or a sense of pressure or discomfort in the praecordium, brought on commonly by emotion or effort, sometimes by exposure to cold, always exaggerated by emotion or effort, always, if serious enough, necessitating the cessation of exercise or movement save in exceptional instances of which I shall speak. These sensations are associated generally with a radiation of pain or numbness or paraesthesia into the left arm more commonly, not infrequently into the right; into the neck, especially on the left side and, more rarely, into odd, distant localities. The first sensations of discomfort are very commonly in one or both arms, radiating to the substernal region. Pains in these localities brought on by effort or emotion and yielding with rest are always suspicious. I have seen angina in which, at the onset, the pains were referred purely to several teeth.

2. Severe spasmodic attacks coming on with emotion or apparently without cause which, save in the graver forms associated with coronary thrombosis, are relieved, almost always, temporarily, in their earlier stages by the nitrites.

As every physician knows perfectly well, anginoid sensations run all the way from the slight, tired, toothache-like feeling in the left arm or the

\*Read before the Utah State Medical Association, July 3, 1929.

indefinite sense of substernal pressure and discomfort, to the severe, vice-like, gripping, boring pains of the graver attacks. A rather characteristic feature of the paroxysm, especially in the more highly educated and sensitive, is the sense of apprehension that comes with it, and this, in itself, goes all the way from a simple realization that this is a warning signal to which one must pay attention, that he must stop, that he cannot really go on with what he is doing, to the intense *angor animi* and fear of death which is characteristic of the graver attacks. This condition is often associated with cutaneous hyperaesthesia or paraesthesia over the precordial area and upper chest and along the arms in the region of distribution of the last cervical and first two dorsal nerves.

Now it is quite obvious that pain in the distribution of a definite nerve supply may be caused not only by a referred pain as in these cardiac manifestations, but also by pressure on or by injury to the nerves themselves; and pain in that distribution common in angina is not so very infrequent in disease of the lower cervical or upper dorsal vertebrae, that which has given rise often to confusion. But here the conditions of onset of the pain and the nature of the attack are always different and a mistake should not be made. Cutaneous paraesthesia and hyperaesthesia in like regions occurs also in cardiac disease other than in angina.

#### DIAGNOSTIC REFLEXIONS

In recognizing the syndrome which we call angina pectoris those symptoms which are suggestive are not the mere character and distribution of pain, but the clinical course of the manifestations, the way in which the attacks come on, the manner in which they may be induced, the procedures by which they may be relieved, the way in which the patient behaves during the attack. Often, the age and physical conditions and surroundings and temperament of the patient, as every practitioner knows, play a part which may be conclusive. For instance, a girl of sixteen may complain of intense attacks of praecordial pain simulating angina very closely, and yet few of us would suspect that the manifestation was serious. We should demand confirmatory evidence of grave organic disease from the history, the physical signs or the results of other studies, that we might not feel necessary in a man of fifty; and we should usually find evidence enough that the attack was hysterical.

In like manner it is not at all uncommon to find in a young woman with a clean history, a story perhaps of abdominal pains, and a high degree of pulsation of the abdominal aorta; but we should not suspect an aneurysm. I have seen men rash enough to make a diagnosis of angina or abdominal aneurysm in such cases, but angina in a girl of sixteen or abdominal aneurysm in a young woman with good arteries elsewhere and without lues, are almost unheard of, and no one need give himself much anxiety under such circumstances unless the evidence is overwhelming.

One of the most important and characteristic features of angina is the appearance and behaviour of the patient during the attack. I shall never forget the picture of an old friend who, one day, I found on my doorstep, grey, pale, sweating, clinging to the railing, unable even to touch the button of the doorbell. This man, a few months before, had wanted to go to a well-known foreign bath resort for the treatment of cardiac disease. He was a native of the country in which this bath resort lay. I had warned him that if he decided to go he should first let me give him a letter to a distinguished clinician in that country; that if he went to the resort with a line from him he would be well cared for; otherwise he might easily receive a very careless sort of treatment—that which, alas, at that particular resort, was painfully common. He did not follow my advice. As he approached my house, boiling with indignation at the story he was about to tell me, his attack came on. When finally he was able to enter my consulting room his first words were: "I am ashamed of my countrymen." That picture of the fixed attitude, the pale, agonized expression, the ashen grey face covered with beads of sweat—that is the common picture.

One of the most pathetic instances that I remember was that of a man who, at the moment of the attack, was in the habit of rising from his bed, crossing the room to the mantelpiece on which he rested his left elbow, and stood swaying to and fro as he groaned gently, the tears pouring from his eyes, the sweat from his face—a distressing picture. Such attacks are uncommon, but are unmistakable when one sees them. Charles Sumner is said to have had the habit of walking about his room in severe attacks. But such movements are quite different from the violent muscular spasms of an hysterical attack.

Sometimes the relation of effort or emotion to the onset of anginoid pains may be entirely unappreciable to the patient. This is quite true in instances of coronary thrombosis. But after recovery, if recovery follow, the patient often appreciates the necessity of the restriction of physical effort and the relation of emotional strain to subsequent attacks of angina.

#### ANATOMICAL CHANGES IN ANGINA

But here let us stop for a minute and consider what we know about those anatomical changes which are associated with angina. At the very beginning, in the descriptions by Heberden and others, the calcified, narrowed coronary arteries were considered the most important elements in the picture. Since then much has been written about the frequency of coronary disease with angina, but many have laid emphasis on the circumstance which is undoubtedly true, that the gravest coronary disease, even thrombosis, may occur without anginoid pains. Others have called attention to the frequency with which the aorta shows signs of atheroma or syphilis. This has led some to feel that well-marked anginoid symptoms are rather more characteristic of aortic than coronary disease. Indeed, some are accustomed



to class as angina those attacks of nocturnal dyspnoea and anxiety so common in instances of syphilitic aortitis and aortic insufficiency. No one denies that coronary thrombosis may occur without much, or indeed perhaps without any of that which the patient actually describes as pain. No one denies that aortic disease may form the basis for anginoid attacks—for instance, by narrowing the mouths of the coronaries—but the more I see of angina the more I am inclined to feel that the picture of spasmodic attacks or discomfort induced by emotion or effort of the sort that I have described, is usually associated with coronary disease which interferes with the nourishment of the heart muscle and is, inferentially, often associated with painful coronary spasm. It may well be, as Keefer and Resnik<sup>1</sup> fancy, that the symptom is definitely associated with myocardial anoxemia. One of the most striking characteristics of anginoid pains is their relation to effort and emotion. But, as I have said, the immediate exciting cause of some of the sharp spasmodic attacks is hard to make out.

Those attacks, the gravest in their immediate import, which are associated with sudden coronary thrombosis, from which the patient recovers, are sometimes followed by years of disability in the sense that after the initial attack the patient finds himself in the same condition as does one in whom the onset of anginoid pains has been gradual; he can no longer take his accustomed physical exercise and he can no longer stand emotional strain without the appearance of anginoid pain. Here the symptoms have clearly followed a primary damage to the heart muscle by the coronary thrombosis.

The onset of mild anginoid symptoms, though commonly insidious, may then sometimes follow a definite coronary thrombosis. But it may also be sudden and without apparent cause, with the appearance, when the patient is at rest, of a slight aching pain perhaps in the substernal region or perhaps, at first, only paraesthesia or aching in one or both arms, pains which the patient may regard as rheumatic. Later, however, he finds that they are brought on or exaggerated by emotion or effort.

I think of such a patient whom I observed several years ago, a man in the early sixties who noticed, one evening, while getting ready for dinner, a rather uncomfortable "toothache-like" pain along the inner side of both arms. This individual, who was a physician, was rather struck by the location and character of the pain, which was unlike anything he had ever felt before. He avoided consulting his colleagues and kept very quiet for several days. He found out first that after several hours in bed, the pain disappeared, but recurred after rising. When it had entirely disappeared he found that unusual effort, such as brisk walking, brought the pains back immediately. Finally, after about a month, exceptional and unintended effort brought on an unmistakable attack of pain in the arms, radiating into the upper substernal region, which brought the sub-

ject to a standstill. With care this man has led a useful life since then, with very slow progress of his symptoms.

What happened to him when first he felt the pain? It seems to me that there is good reason to fancy that in such a case as this there was a sudden thrombosis of small terminal branch or branches of diseased coronaries. Up to the day of onset he had never noticed the least disability on exercise and he was a man who had taken rather violent exercise until the moment of the attack. The attack came out of a clear sky. Within a week or two afterwards tests showed that the characteristic disability had appeared.

Now in those cases of angina of gradual onset precipitated by emotion and effort, one usually finds either definite coronary disease or single or multiple areas of fibrosis in the heart muscle the cause of which is often not entirely clear, or both. I am rather inclined to think that time will show that in such cases as that just referred to, in which the onset, though very mild, is sudden and followed later by the symptoms characteristic of angina of effort—I am inclined to think that time will show that, in such cases, the onset has been associated with the occlusion of a small terminal branch or branches of the coronary vessels; not the brutal occlusion of a large branch with a considerable area of infarction of the heart muscle with its characteristic symptoms, but nevertheless a sudden thrombosis of final terminal branches which has produced enough interference with the circulation to bring on thereafter the characteristic symptoms of angina. I quite agree with my friend, Harlow Brooks, that in few instances of angina which one studies carefully anatomically do we fail to find, at necropsy, rather definite coronary changes.

The answer of the opponents of the hypothesis that angina is usually associated with coronary disease—the answer, that many show coronary changes who have not had angina and that in some dead of angina, coronary disease has not been demonstrated—does not seem to me convincing. For coronary disease or multiple fibrous patches in the heart muscle are found in the great majority of instances, and the most characteristic picture of angina may be produced by coronary thrombosis.

#### EXCITING CAUSES

What then do we know about the cause of the syndrome which we call angina pectoris?

1. We know that the severe spasmodic attacks begin and run their course like spasms of involuntary muscle. We know that they are relieved in many instances by antispasmodics like the nitrites, which relax the arterial spasm. We know that in most instances the hearts of patients who have had attacks like this show obvious disease of the coronary vessels postmortem. We know that in those subject to angina, attacks may often be brought on or precipitated by emotion and effort.

2. We know that, in another sort of clinical picture, distressing sensations in these same regions and of the same character, though often



milder, may be produced by effort or emotion, yielding in the less severe instances, so soon as the effort is stopped. We know that in such patients the frequency of the paroxysms increases usually through the years. The attacks appear on less and less provocation until the wretched patient is bedridden. And we know that, at necropsy, there is generally either obvious disease of the coronaries or numerous sclerotic areas in the heart muscle not improbably the result of the gradual occlusion of terminal coronaries.

3. Finally we know that the most exquisite and persistent and unrelievable pain of exactly the same character, together with other suggestive symptoms of thrombosis, tachycardia, fall of pressure, fever, leukocytosis, may follow the occlusion of a branch of a coronary artery.

In other words, whatever justification there may be for other hypotheses as to the cause of angina pectoris in instances in which obvious disease of the coronaries has not been recorded, the evidence that it is related, for the most part, to coronary disease is very strong. We know that it may be brought on by coronary thrombosis; we know that, excepting by the use of morphia, the most satisfactory way in which to relieve it, save in coronary thrombosis, is by the use of the nitrites, which we know relax vascular spasm; and, in the third place, we know that evidence of actual disease of the larger or smaller coronaries, or occlusion of their mouths as a result of disease of the aorta, or evidence of disseminated fibroid patches in the heart muscle which mean the replacement of necrotic tissue which in many instances may best be accounted for by the hypothesis of the occlusion of terminal branches of the coronaries, are usually found at necropsy. These circumstances lead me to believe that the syndrome that we call angina pectoris is usually of coronary origin. That the character and distribution of pain in aortic disease—syphilis, aneurysms—is similar to that in anginal attacks is undoubted, but the spasmodic attacks of dyspnoea observed especially at night, usually seen in hypertensives, the “angina of rest” of Vaquez, form, it seems to me, a special, distinct picture. This picture I have not as a rule classed as “angina pectoris.” I agree that in such cases evidence of coronary sclerosis or of fibroid changes in the heart muscle is not so common, though sometimes narrowing of the mouths of the coronaries and areas of fibroid change are found. So much has been written about coronary thrombosis in the last few years that it may be hardly worth while to enter into any lengthy discussion of the picture here. The history of the recognition of coronary thrombosis is, however, so interesting that I cannot refrain from saying a few words. I feel sure that had we not been so satisfied with the term “angina pectoris,” had we been considering our patient from the proper standpoint, that is from the standpoint of one trying to make out physiologically what might produce these given symptoms, instead of being satisfied to classify them

under a name, the clinical picture of coronary thrombosis would have been recognized many years before it was.

#### CORONARY DISEASE

Brought up with the feeling that was held by the old English authors that angina was usually a manifestation of coronary disease, it never occurred to me that the first instance of coronary thrombosis that I saw—in 1895—was anything other than a coronary thrombosis, and it never occurred to me that anyone else would have had any other view of the case. The patient was seen by Doctor Osler. We discussed it together. There was no necropsy, but I feel perfectly sure that he regarded it as an instance of coronary thrombosis as well as I. When I met with my second case in 1899, a most typical example, followed, two days later, by a pericardial rub, I recognized the case equally clearly, commented on it in my notes, and often talked about it to my students. I am perfectly sure that many physicians all over the world have recognized the syndrome in times past. The credit, however, of bringing the clinical picture before the medical public belongs to my dear friend, Herrick of Chicago, who first really called attention to it in 1906. It is truly extraordinary to see how many instances have been recorded since this time; how frequent a manifestation it is. As one of my distinguished colleagues observed the other day, it is perhaps too readily suspected by some. One might fancy that it was a new disease. How many new diseases are like coronary thrombosis, under our eyes every day of our lives but recognized by the world only when someone like Herrick has put the matter clearly before the public? I am always suspicious of new diseases.

I have spoken of the frequency of coronary disease, of the circumstance that coronary thrombosis followed by scarring of the area of infarction in the heart muscle and recovery may be followed by the development of characteristic anginoid pains on effort, and of the possibility that, in some cases, the sudden onset of mild anginoid symptoms without apparent cause, without the fever, leukocytosis, fall of pressure, tachycardia and other signs of an extensive infarction, may mean the sudden thrombosis of smaller terminal branches. Such an onset may be followed, at any rate, by the typical picture of permanent angina of effort. I have mentioned also that the symptoms of paroxysmal angina are, in their course, very like the spasm of smooth muscle fibre and that they are relieved by the nitrites, as if, in some way, disease of the coronaries or increasing demand on insufficient vessels brought on vascular spasm, though, of course, this is but a hypothesis.

One should not forget, however, the most interesting fact that, especially in hypertensives, beginning dilatation of the heart with evidences of pulmonary engorgement or particularly failure of the right side of the heart, not infrequently mark the end of anginoid pain. A patient who



for years has suffered from angina may lose his pains with the onset of congestive cardiac failure and, as Harlow Brooks has emphasized in a recent address, if coronary thrombosis may sometimes mark the beginning of anginoid pain, it sometimes, also, marks the end in that a large area of infarction upsets the cardiac compensation, and the patient dies after weeks or months or, indeed, years of congestive cardiac failure without the recurrence of angina.

Indeed sometimes an attack of coronary thrombosis, followed by symptomatic recovery, may be succeeded by a long remission in anginoid pains. This is due sometimes, I think, to the moral influence of the attack and the treatment which have impressed on the patient the necessity of leading a reasonable existence.

#### REFLEXIONS AS TO TREATMENT

But in this informal talk I want to dwell especially on the question of how we may help the sufferer from angina pectoris. Years ago, in speaking with my dear and wise old instructor, Dr. Frederick C. Shattuck of Boston, I observed that I always felt depressed and discouraged when I saw a patient with angina because there was so little that I could do. He laughed and said, in effect, that there were few conditions in which he felt he could do more. As the years have gone by I have come to realize fully how wise he was and how innocent and young I was. One can do much for many patients with angina; indeed the ability to help a patient with angina is a rather good test of the quality of the doctor. 'Tis a familiar truth and nowhere is it more apparent than in conditions such as this, that the wise physician accomplishes more by his kindly and intelligent advice and counsel than he does by his prescriptions and his medical treatment. The treatment itself varies greatly with the condition in which we find our patient, but under nearly all conditions the personal element, the tact, the judgment, the kindness of the doctor, his willingness to take time to explain matters properly to his patient, to break unpleasant truths to him in such a way that he will look upon the hopeful side—these are often the most important elements of treatment. This applies equally to the family practitioner and the consultant. One cannot treat the patient with angina pectoris without giving him time and careful consideration.

Suppose a man comes to us, as he commonly does, when he begins to observe that effort produces unmistakable anginoid symptoms.

There is no more fascinating opportunity than that afforded by this situation, to relieve suffering and to prolong life; but it is a time-taking procedure. To begin with, to attempt to hide the nature of his condition from such a patient is silly, and certain to defeat our ends. Does that mean the necessary employment of the word "angina"? Of course not. The word "angina" is the very thing that we are seeking to avoid. We are trying to escape from the tyranny of alarming words, and to express the essence of the situation in such manner that it may encourage rather than depress

the patient. In most instances this is quite possible to accomplish. But it demands time, time and careful explanation—explanation of the nature of the situation; that it is a warning, a red flag, and not a "smash-up"; that it is evidence of some defect in the circulation in his heart muscle; that it is the first notice which every man must have at one time or another, that, physically, he is not in the best condition; that every man of his age has some bad vessels; that many of us have the good fortune to have these in positions where they do no harm; that he, perhaps, has had bad luck, but that, after all, the warning may be rather a bit of good fortune than otherwise. And here I often refer to Osler's paper on "The Advantages of a Trace of Albumen and a Few Tube Casts in the Urine for a Man Over Fifty Years of Age," a diversion which often amuses and encourages the patient, at the same time impressing on him the truth. Or again I tell him that he is somewhat in the position of the patient with early tuberculosis, whose first symptom is an haemoptysis, often the most life-saving of incidents in that it draws attention to the existence of pulmonary mischief amenable to treatment, mischief which might otherwise be overlooked until too advanced for relief.

Here the value of experience becomes especially appreciable. We should preserve with the utmost care the records of the occasional medical miracles with which we all meet, and of the especially favorable cases in our practice. These will be among our most precious implements in the treatment of angina; they will be more valuable to us than most drugs. A true story of someone who has recovered from a like condition is often almost life-saving to the sufferer. He forgets everything else but the picture of that patient who recovered and soon, in his own heart, he comes to fancy that this perhaps may be the rule rather than the exception.

Only the most confirmed Christian Scientist exaggerates the importance of faith and hope in the practice of medicine.

In almost every instance of angina one is justified in encouraging the hope that if all goes well the patient may either recover entirely or at least be able, with certain reasonable modifications of his habits, to go on for a long period. It is a careless and sloppy method of practice to satisfy one's self by a few words with the patient, and by the statement that this is "false angina" and not "true angina." What we are trying to do is to escape from the dominion of terrifying and misleading words, and the words "false angina" produce in the patient's mind the picture of something as definite as his mistaken fancies concerning the meaning of "angina." Merely to give one's symptoms a name does not mean much. If one can make his patient feel that the word "angina" does not mean a sentence to suffering and death, but only describes a certain set of symptoms which vary enormously in their intensity and prognosis; that there is a considerable element of hope in his case, you can do far more for him. One must remember that the essential feature of our treat-



ment should be to encourage him to modify his life as he should; one can accomplish this only if the patient realizes the necessity.

And now after one has talked to him and encouraged him and led him to feel that what has happened may be hard luck, but not the end by any means, that it may indeed lengthen his life by inducing him to lead a proper sort of existence, after all this, what else have we that we can do for a patient with beginning anginoid symptoms? We can, it seems to me, do a great deal.

1. One must put the patient into the best possible physical condition. To do this we must carefully go over his manner of life. We must find out just what it is. Very often we find that he leads a disordered and hurried life. We must begin by inquiring into the character of his day, and these inquiries we must make not only of himself, but of his wife and others who observe him. We must see to it that he begins the day without hurry; that his habits are regular; that he takes plenty of time for his meals; that he eats deliberately and, of course, moderately; that he avoids constipation, and this is a matter often that needs the most careful attention and is very time-taking for the physician, for the treatment of constipation does not consist in simply prescribing a laxative. We must look carefully into his habits in view of the possibility that he may be subjected to some of the toxic influences which have been thought to play a part in inducing angina. Gout is certainly of importance. Tobacco may be of importance; it is certainly in instances of hypertension. While I, myself, have never seen an instance of angina which was definitely "cured," if one may use the word, by the omission of tobacco, I am sure that I have seen great benefit in some cases of nervous, heavy smokers, from the abandonment or modification of smoking. If the patient be one of those unfortunate, weak-minded invertebrates, of whom there are too many in the world, who "simply can't stop smoking," who cannot refrain from making himself a nuisance to his fellow man by standing around, red-eyed and "frowsy" headed, while he smokes his cigarette in the crowded dressing room of a sleeping car before he can begin his morning toilet, there is but one thing for him to do, and that is to stop it. Every man of that sort has a serious drug habit. If he is obviously smoking too much, and is a man, he should learn to smoke in moderation and only at leisure after his meals.

Every effort must be made to induce the patient to avoid hurry. A hurried day is often initiated by habits of rising and dressing in a few minutes. Some patients, if taught to realize this, may learn to add a quarter or even a half an hour to their dressing time, to read the paper during the hours of dressing, and arrange matters in such a way that, the initial hurry avoided, the day goes on with a calm with which they have been previously quite unfamiliar.

In order to put one's patient in the best possible condition the importance of searching for and relieving focal infections cannot be exaggerated.

It is often impossible to say that the relief of this oral sepsis or that chronic prostatitis has been the cause of so much improvement, but there is no doubt whatever that occasionally the influence of focal infections, apparently unimportant, is far-reaching. I have had one instance of the disappearance of an angina following a tonsillectomy for good cause. The improvement, of course, may have been *post hoc* rather than *propter hoc*. However that may be, the incident is true, and so worth heeding, while from a therapeutic standpoint this experience has been of considerable value in helping me to induce patients to do what it seemed to me they should.

I am very apt to end my conversation with a patient of this sort by reference again to Osler's habit of speaking of the advantages of a trace of albumen in the urine for a man over fifty. "But," one may say, "suppose this man ask you about sudden death?" That is a bugaboo which, with most patients, is dealt with very easily. It is not the patient who is annoyed about that; it is the family. To the patient who asks you it is easy and true to say that he has a somewhat better chance than the average man of dying the most blessed sort of a death. That, alas, is about all, because many sufferers from angina die in other ways. Too many, alas, go through the distressing stages of progressive myocardial failure. It is not hard as a rule to make one's patient look at the possibility of sudden death as a blessing rather than a menace.

The medical treatment of such a patient, beyond special emergencies, is symptomatic. If the patient be syphilitic he has, of course, a door of hope, but syphilis is not the common basis of angina. In syphilitics it is exceedingly important to begin treatment with mercury and iodides, and not to use intravenous arsenical treatment until later. I have not happened, myself, to see sudden death follow the abrupt use of arsphenamine, but I have seen what seemed to me grave, immediate reactions.

The treatment of constipation I have already referred to. The treatment of the attacks may be summarized in two words—"nitrites, morphia." The nitrites often produce the desired result. It is only in the grave spasms that morphia is necessary when, of course, it should be employed freely.

I feel, as does Harlow Brooks, that either tablet triturates of nitroglycerine or liquid tincture of glonoin are the best forms in which to employ the nitrites. They are usually as good as nitrite of amyl. The nitrites should be employed symptomatically. Continued employment seems to me quite useless. The dose may be increased as is necessary. It is a great relief to many individuals to feel that they have in their pockets a ready relief of this sort. Other drugs, of course, help, but the nitroglycerine is so much simpler. Still one must not forget that it is very hard to make any absolute rule in medicine, and sometimes, where nitroglycerine, even in small doses, brings on uncomfortable flushing, other preparations such as Hoffman's anodyne or sweet spirits of nitre may help.



I have a dear friend who always carries in his pocket a lovely cut-glass cornucopia-shaped receptacle with a silver top—a receptacle which must have been intended, I should think, for smelling salts. This receptacle contains about two ounces of *spiritus frumenti*. A little straight whiskey stops the attack and the patient who, beside being a temperate man, is one of the most distinguished of our colleagues, ought to know. There are some advocates of temperance who call themselves Christians who might disapprove of this; but there is no intemperance more blind or more cruel, no immorality more pernicious than that practised by some well-meaning fanatics in the name of temperance and morality.

If the patient be hypertensive or obese these conditions must be considered and properly combated.

2. If the attacks become more frequent or, of course, if one find his patient in an attack suggesting a coronary thrombosis, or indeed, if, in a progressive angina, the signs of myocardial failure come on, then the urgent need is for rest—a long rest. What is the value of rest? In an acute cardiac infarction or with a myocardial insufficiency the value of rest is obvious. By saving every heart beat the heart muscle is given an opportunity to regain strength; the circulation about an area of infarction may have a chance to become reestablished so far as possible; the heart is submitted to the least possible strain while the softened area is becoming scarred. In instances of angina where the attacks are becoming more frequent, a rest treatment is often of great value not only in that it spares an exhausted heart unnecessary beats, but in that it gives the patient an invaluable opportunity to adjust himself to the proper manner of life.

Under such circumstances what does one mean by rest? At what should we aim? Rest in bed at home? No. That is but a halfway measure. If it be possible the patient should be at rest in a hospital, wholly separated from his affairs, or if it must be at home, he should be isolated and under the care of a nurse. The patient almost always asks why home is not just as good as a hospital. Although he protests, it is usually not so very difficult to explain the situation. Few busy men can rest, really rest, at home. How many of us have tried to retire to the upper floors of our house and sought to spend a few days entirely freed from the cares of everyday life? How impossible it is! Every ring of the doorbell, every rattle of the telephone, suggests forgotten duties. The moment we are left alone we desire to get out of bed to arrange this or that little thing which must be done before the rest really begins, and the rest never comes. More than that, at home one has a sort of a right, or at any rate feels a sense of duty to direct or advise or meddle with a thousand little things. In a hospital or, if impossible, so well as one can at home, the patient should be guarded from every interruption. He should be induced entirely to throw aside his business affairs. He should be kept absolutely in bed

under rigid rules; and it seems to me that the importance of rigid rules, such as forbidding him to rise from bed even to use the commode, is as important here as in any so-called "rest cure." The value of such rigid, martinet-like rules in the care of such a patient at the beginning, which is obvious in the instance of a grave coronary thrombosis, lies in the circumstance that it impresses deeply upon the patient the necessity of care in the future. At the same time, the improvement which usually follows the rest encourages him and gives him hope. There is no manner in which one may so certainly induce the patient to lead the proper life in the future as by a rigid period of rest and retraining. The period of rest after a severe coronary thrombosis may have to be very long, and it is often wise to keep a patient who has had merely persistent anginoid symptoms in bed for at least a month and then to give another month in very, very gradual retraining. While in bed it is important that the patient should have thorough general massage so as to keep the muscles in the best possible condition. When one begins to allow the invalid to sit up and get out of bed the progress should be step by step. A month's rest in bed in a hospital demands nearly a month of retraining and graded exercises before he leaves, and, where it is possible, I always like to send the patient for three weeks or a month thereafter to a good sanatorium where he may be under the care of well-trained men—a sanatorium like Clifton Springs, for instance—or to a resort like Atlantic City, so that he may get back into the habits of a normal life under proper observation. The permanency of the improvement following such treatments is sometimes astonishing, not only in those patients who have had a definite coronary thrombosis, but sometimes in instances where the anginoid attacks have lasted for several years and have given every promise of pursuing a progressive course.

My friend X, aged forty-eight, an engineer with important responsibilities, had begun, in 1913, to suffer from a sense of tightness across the front of the chest on effort. In the fall of 1914 he consulted me because the attacks, brought on by slight effort or emotion, had become very severe. They were located behind the sternum, were like a "red-hot iron" and radiated down his left arm and to a lesser extent his right. The pressure rose during attacks. A long rest, first in a hospital, then at Clifton Springs and in the country, with gradual retraining, was followed by a complete disappearance of the attacks. The patient learned how to live. He resigned his position, but soon was able to take up work as a consulting engineer and is today, after fifteen years, an active, successful man. He has resumed golf in moderation. He feels sure that violent effort would bring on his pains, but he has learned his lesson, and while, fifteen years ago, slight effort brought on severe attacks in bed, today he is leading a useful life.

My colleague, B. H. Rutledge, has recently had charge of a man of over seventy, who had had

characteristic angina of effort, of increasing frequency for eight years, so bad that they came on under most trivial effort, and waked him repeatedly at night. A treatment of complete rest and retraining lasting three months has, for the time being, wholly ended the pains. This man has resumed his business successfully for nearly a year; he has not had an attack for a year.\* Cured? Of course not, but greatly benefited and enabled to live a comfortable life which may endure for a considerable period.

Medically we know only palliatives, but our general management of the case may bring about practical recovery for considerable periods of time. There is no condition where the skill and judgment of the physician comes into greater play.

As I have said elsewhere, the management of the family is the most difficult problem. The patient is usually one's best confidant. The family are very hard to deal with and it is in their power to make the patient's life utterly miserable. One must seek by every conceivable means to induce the family to let the patient alone, and never, by word or act, to show their anxiety. To do this is not always possible. Too often a loving but ill-balanced wife or husband, by constant manifestations of anxiety, may ruin the life of the patient.

At the outset of these rambling remarks I spoke of the tyranny of words under which we all live. The tyranny of the slogan or the shibboleth, while it may be a humiliating evidence of human weakness and impressionability, is, at the same time, a striking example of the power of words. Sometimes, I think, we physicians forget that if the knife be the most valuable implement of the surgeon, so is the tongue the most precious instrument of the physician. There are still relatively few specifics in medicine. It is by our counsel, by our moral influence, by our powers of explanation or illustration or reasoning, that we induce the patient to realize that which he must do to preserve himself and others from disaster. It is by the tongue that we achieve our chief results. Without careful education and training, without a good head to begin with, without experience and the power to profit by experience, no surgeon can properly use his knife; no physician can properly use his tongue. There is no regular rule by which the physician may be guided. Medicine, while we remain human beings, can never be practised by rule; if it could, the function of the physician would be much easier if, indeed, it continued to exist. There is no specific for that syndrome which we call "angina pectoris," but there are few maladies which can be more profoundly influenced by the wise counsel of a judicious physician. It is easier, far easier, to sit down and write a prescription which may be handed to the patient with a few words of direc-

tion in an instance of tertian malaria, than it is to guide a patient with early anginoid symptoms into that course of life which may enable him to play his full part in the world's activities. But the results in the latter instance may be just as great, if harder to achieve.

Let us beware of the tyranny of words, but let us not forget the power of words; for in wise words, wisely used, lies a great part of our art.

1208 Eutaw Place.

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### ACUTE CHOLECYSTITIS—ITS SURGICAL TREATMENT\*

By STANLEY H. MENTZER, M. D.

San Francisco

DISCUSSION by Stewart Lobingier, M. D., Los Angeles; O. O. Witherbee, M. D., Los Angeles; Harold Brunn, M. D., San Francisco.

THE treatment of acute cholecystitis varies markedly. On the Continent the treatment is essentially radical, in America it is mainly conservative, but within each of these areas there are widely divergent views on the subject. The study here presented was undertaken at the San Francisco Hospital to establish the status of the treatment of acute cholecystic disease in the San Francisco Bay region of California.

#### CASES IN THE LITERATURE

Hotchkiss<sup>1</sup> in 1894 reported the first case of acute gangrenous cholecystitis. In 1904 Mayo-Robson<sup>2</sup> reported two cases, and in 1906 Ross<sup>3</sup> reported five cases and gathered eleven from the literature. Since that time scattered case reports have been published by Tate,<sup>4</sup> Whitacre,<sup>5</sup> Cramp,<sup>6</sup> Cottam,<sup>7</sup> Andrew,<sup>8</sup> Cameron,<sup>9</sup> Ferguson,<sup>10</sup> Gould and Whitby,<sup>11</sup> and others (Table 1). To interpret the literature on this subject it is necessary to understand the different writers' conceptions of acute gangrenous cholecystitis. Unfortunately this is difficult because of the variations in classification and the personal element in interpretation of the pathology of acute cholecystitis.

#### CLASSIFICATION OF GALL-BLADDER LESIONS

I have tried to follow MacCarty's<sup>12</sup> classifications of gall-bladder lesions, considering acute cholecystitis as simple "acute catarrhal cholecystitis" and "cholecystitis purulenta necrotica."<sup>13</sup> The admissions into the San Francisco Hospital, under the heading of acute cholecystitis, include acute catarrhal cholecystitis, acute exacerbations of chronic cholecystitis, the acute cholecystitis of pregnancy, acute hydrops, acute empyema, acute phlegmonous cholecystitis, and acute gangrenous cholecystitis (Table 2).

\* From the Department of Surgery, University of California Medical School, San Francisco.

\* Read before the General Surgery Section of the California Medical Association at the fifty-eighth annual session, at Coronado, May 6-9, 1929.

\*It is now nearly two years. The patient remains active and in good condition.



TABLE 1.—*Acute Gangrenous Cholecystitis—Case Reports*

Author	Year	No. of cases
Hotchkiss .....	1894	1
Ferguson .....	1898	1
Mayo Robson .....	1904	2
Ross .....	1906	5 total 11
Tate .....	1910	1
Whitacre .....	1911	1
Cramp .....	1915	2
Cottam .....	1917	3 total 44
Andrew .....	1923	1
Cameron .....	1927	4
Gould and Whitby .....	1927	2

Lobingier<sup>14</sup> has added a group which he calls “necrotic edema.” This lesion belongs to the early acute hydrops and to the early or potential gangrenes. Many of my cases of acute cholecystitis undoubtedly belong in this group, but in this series of acute gangrenous cholecystitis, I have tried to avoid such cases because I feel that many of these subside under conservative treatment; whereas acute gangrenous cholecystitis could scarcely do so.

METHODS OF TREATMENT

Most authors agree that acute gangrenous cholecystitis warrants extirpation of the gall bladder immediately. If this lesion could be identified preoperatively, there would be little question about the proper procedure. But it is so difficult to interpret the type and the degree of pathologic change in the gall bladder clinically that the surgical treatment is often in doubt. Experience has shown that most acute lesions in the gall bladder subside under conservative treatment, and the American authorities advise conservative care in “acute cholecystitis” for this reason. This is especially true for simple acute catarrhal cholecystitis, acute hydrops, and early acute empyema of the gall bladder. Even cases of early perforations of the gall bladder are often best treated conservatively. Therefore Haggard,<sup>15</sup> Deaver,<sup>16</sup> Bunts,<sup>17</sup> Lyons,<sup>18</sup> Verbrycke,<sup>19</sup> DuBose,<sup>20</sup> McGuire,<sup>21</sup> Judd,<sup>22</sup> Richardson,<sup>23</sup> Muller,<sup>24</sup> Archibald,<sup>25</sup> Balfour,<sup>26</sup> Martin,<sup>34</sup> and others have advised conservative treatment for acute lesions of the gall bladder. On the other hand, Walton,<sup>27</sup> Leriche,<sup>28</sup> Cotte,<sup>29</sup> Kirschner,<sup>30</sup> and many others recommend immediate cholecystectomy for “acute cholecystitis.” The attitude of a group of seven local surgeons in this matter is indicated in this present study.

SAN FRANCISCO HOSPITAL STATISTICS

From 1919 to 1928 there were 76,902 hospital admissions into the San Francisco County Hospital. One and a half per cent of these were ad-

TABLE 2.—*Acute Lesions of the Gall Bladder—Pathologic Classification*

Acute catarrhal cholecystitis
Acute exacerbation of chronic cholecystitis
Acute cholecystitis of pregnancy
Acute hydrops
Acute empyema
Necrotic edema
Acute phlegmonous cholecystitis
Acute gangrenous cholecystitis

mitted or subsequently diagnosed as “cholecystic disease,” and 31 per cent of the latter were operated upon. One hundred and sixty-one cases were diagnosed “acute cholecystitis,” and thirty-eight of these (23 per cent) were subsequently proved to be acute gangrenous cholecystitis. Therefore about 0.042 per cent of the total hospital admissions and four per cent of the total cholecystitis admissions were for acute gangrenous cholecystitis. This unusually large number of patients with acute gangrenous cholecystitis can be accounted for by the fact that this hospital receives most of the urgent cases from the Emergency Hospital service of the city of San Francisco, and by the fact that the usual county hospital patient has an advanced lesion before he enters.

McGuire<sup>21</sup> has reported that five per cent of one thousand gall-bladder operations were performed in the acute stage, and MacCarty and Corkery stated that above five per cent of five thousand cholecystectomy specimens belonged to the acute group.

Seventy-eight of the one hundred and sixty-one admissions for “acute cholecystitis” were operated upon within the first twenty-four hours after admission; thirty-eight of these were found to be acutely gangrenous gall bladders.

Of the remaining eighty-three cases, although diagnosed acute cholecystitis, sixteen were not considered imperatively operative, nine were acute abdominal lesions but not definitely acute cholecystitis, thirty-two were observed for a period of time and finally diagnosed as subacute lesions other than cholecystitis and not operated upon, three were acute exacerbations or onsets of cholecystic disease associated with pregnancy and were not operated upon. Eighteen cases were definitely advanced acute cholecystitis and were treated conservatively without surgery.

Among the seventy-eight cases operated upon within twenty-four hours after entrance into the hospital, thirty-eight were found to be acute gangrenous cholecystitis, nine were acute exacerbations of chronic cholecystitis or acute empyemas with fibrin or purulent exudate on the serosal surface of the gall bladder but not gangrenous or ruptured. There were thirty acute or subacute exacerbations of chronic cholecystitis limited to the gall bladder and without gross involvement of adjacent structures. None of these were gangrenous, but many belonged to the groups of necrotic edema, subacute empyema, and subacute hydrops. One was a true acute catarrhal cholecystitis, a relatively rare lesion. One patient was operated upon for “acute cholecystitis,” but the gall bladder appeared normal and no other abdominal pathology was found.

ACUTE GANGRENOUS CHOLECYSTITIS

The thirty-eight cases of acute gangrenous cholecystitis that were operated upon immediately were studied in detail. Twenty of the patients were men and eighteen were women. Their ages varied from nineteen to seventy-six years, the



average being forty-nine years, but the greatest number occurring about the age of fifty-five.

*Pathology.*—Acute gangrene occurs occasionally from torsion of the gall bladder. Textbooks of pathology consider this form of etiology, but it is not often encountered. Cramp<sup>6</sup> reported such a case in 1915, and a few others appear in the literature. None of our cases belong in this group.

The majority of cases occur as a result of gall-stone impaction in the neck of the gall bladder or in the cystic duct, interfering with the blood supply and so producing gangrene. Gall stones, therefore, account for a large number of these, but in our series stones were absent in ten of the thirty-eight specimens. We must account for the gangrene in these instances by an acute virulent infection and, in conformity with this thesis, six of the ten noncalculous gangrenes were described by the operating surgeon as acute phlegmonous cholecystitis with gangrene. Hotchkiss<sup>1</sup> attributed the gangrene in his case to pressure of the exudate within the gall bladder with consequent stasis in the blood vessels. Gould and Whitby have reported two cases of acute gangrene of the gall bladder due to the *Bacillus welchii*, gas, and positive cultures having been obtained from the gall-bladder wall, bile, and stones in one case and from the gall-bladder wall and bile in the noncalculous specimen.

Occasionally localized areas of gangrene occur as a result of embolic phenomena, but these cases do not belong to the group of acute gangrenous cholecystitis. They probably rupture early and account for those acute perforations that occur without stones. Those specimens that show gangrenous edges about the site of a decubitus ulcer from stone erosion or perforation, likewise do not belong in this group, for the pathology in these cases is not that of a true acute gangrenous cholecystitis in which half or more of the vesica fellea is gangrenous.

*Symptoms and Signs.*—The majority of the patients operated upon for acute gangrenous cholecystitis had had gastro-intestinal distress for many years. Most of them had the characteristic signs and symptoms of cholecytic disease for long periods, and the present attack resembled previous ones except for its unusual severity. Eight patients, however, vigorously denied ever having had any "stomach trouble" or other symptoms suggestive of biliary disease. This point was emphasized in the histories, and is of particular interest because of its supposed rarity. Tate,<sup>4</sup> Ferguson,<sup>10</sup> Brunn,<sup>31</sup> and others have noted the onset of acute cholecystitis without previous suggestive signs of gall-bladder disease and it is important to emphasize this fact, for it is evident that acute gangrenous cholecystitis may be the primary and initial manifestation of biliary disease.

Most of the patients presented the typical signs of an acute abdomen when they entered the hospital, with fever, leukocytosis, localized tenderness and rigidity, and had vomited one or more

times before entrance into the hospital. One patient, however, was observed in the hospital for eighteen days before the signs were sufficiently definite to warrant surgical intervention. She had been treated conservatively for acute cholecystitis, but gangrene developed slowly and without manifest signs or symptoms until the eighteenth day. Tate reported a similar case in which one month elapsed before gangrene appeared while the patient was observed during an "acute cholecystitis." Brunn's<sup>31</sup> case is interesting in this connection, for he observed a patient who presented few signs or symptoms, without fever and a white count of only 4000, whose gall bladder was partially gangrenous when removed.

*Preoperative Diagnosis.*—A diagnosis of acute cholecystitis was made in all but six of the thirty-eight cases. Two were considered ruptured gastric ulcers, one a diffuse peritonitis, one mesenteric thrombosis, one intestinal obstruction, and one an "acute abdomen." Gall stones were considered present in practically all of the cases, but were found in only 74 per cent.

*Operative Procedures.*—Most of the patients were too ill on entrance to be given any preoperative preparation other than the usual immediate care. They were operated upon within twenty-four hours after entrance except for the one noted above that waited eighteen days. Many of them were explored within one or two hours after entering the hospital.

Exposure was effected in various ways, most of the surgeons using a high right rectus incision. I prefer the Kocher incision as modified by Judd, beginning high up on the ensiform and paralleling the costal margin about three centimeters from its edge. The fascia is incised in the same plane, but the muscle fibers of the rectus are split longitudinally. The posterior sheath of the rectus and the transversalis are incised with the peritoneum parallel to the skin incision. The muscle is then retracted laterally and medially, and good exposure obtained. Closure is not difficult after this incision, and I have never seen a postoperative hernia following this closure.

If the round ligament of the liver is severed and used for traction, it everts the under surface of the liver and adds materially to the exposure of the gall-bladder fossa. The operative procedure is carried out as previously described,<sup>32</sup> except that clamps are not used for traction on the fundus of the acutely gangrenous gall bladder. The vesicle is usually distended and firm, very friable and easily ruptured, and the less it is handled the better. Gentle traction with the fingers of the left hand is usually sufficient for the necessary operative manipulations.

Cholecystectomy was performed for twenty-two of the thirty-eight cases of acute gangrenous cholecystitis and cholecystostomy in sixteen by the seven surgeons who operated in this series. In one of the cases the gall bladder had virtually dissected itself free and was hanging from the liver suspended only by the cystic duct much in



the same manner as Cameron<sup>9</sup> has reported in two cases. In many instances cholecystectomy is an easy procedure in these patients, for the vesicle dissects away from its liver bed readily and is peeled out without serious venous oozing. The gall bladder was clamped off close to the cystic duct in all but two cases. In one of these about a third of the gall bladder was left with the stump of the cystic duct much as Cullen<sup>33</sup> has advised. Lobingier has suggested that the neck of the gall bladder be left and a drainage tube sutured into it. Martin proposed that the gall bladder should be split longitudinally and the wall adjacent to the liver left after curetting the mucosa from it. I have done this procedure in one instance with good results, but as a rule the gall bladder peels away from the liver so readily that it is not necessary.

Abundant drainage is indicated in these cases and was carried out in all but one instance. The patient had a cholecystectomy for gangrene involving the distal half of the gall bladder, without stones. The abdomen was closed without drainage and the patient made an uneventful convalescence.

Some authors insist that cholecystostomy is the operation of choice in acute gangrene. There are times when it is indicated, of course. In this series it was considered advisable in 40 per cent of the cases. It is often easier than cholecystectomy and certainly less shocking, in selected cases. It is not the operation of choice for true acute gangrene because of the danger of leaving gangrenous tissue in the abdomen. Furthermore, it is sometimes technically more difficult because it is impossible to purse-string a drainage tube in friable gangrenous tissue. Coffey<sup>35</sup> recommends cholecystostomy and the use of abundant drainage material as in his "quarantine pack," and, in certain cases, it is the method of choice. But I feel that cholecystectomy should be done whenever possible because it effects the total removal of gangrenous tissue, avoids the necessity for secondary operations, and decreases the time of postoperative convalescence both in the hospital and at home. Eighteen per cent of the cholecystectomy cases left the hospital within fifteen days after operation, while none of the cholecystostomy patients left within that time. Fifty per cent of the cholecystostomy patients remained in the hospital more than thirty days postoperatively; whereas only 18 per cent of the cholecystectomy patients remained that long. Forty-one per cent

of the cholecystectomy patients had their drains removed before the sixth day; none of the cholecystostomy patients had their drains removed before the seventh day. Only six per cent of the cholecystectomy patients had drainage persisting after the third week; whereas 20 per cent of the cholecystostomy patients were still draining. The average duration of stay in the hospital for the cholecystectomy cases was twenty-four days, while the cholecystostomy patients averaged thirty-five days (Table 3).

I do not mean to suggest that all cases of acute gangrenous cholecystitis should be subjected to cholecystectomy. There is a middle ground, of course, so well described by W. J. Mayo<sup>36</sup> in an editorial in 1924. The surgical treatment of this lesion must depend on the type and degree of inflammatory process and the patient's reaction to it. But when possible, cholecystectomy is the operation of choice.

MORTALITY

Mortality statistics gathered from the literature are difficult to evaluate because of the indefinite classification of acute cholecystitis. Most authors refer to acute empyema, necrotic edema, perforation of the gall bladder, and acute gangrenous cholecystitis when they quote surgical mortality statistics for acute cholecystitis. Bunnell<sup>37</sup> states that the mortality in acute cholecystitis is about 30 per cent. Dowling<sup>38</sup> has found it 27½ per cent. Judd and Lyons<sup>39</sup> reported forty-five cholecystectomies and twenty-two cholecystostomies for acute cholecystitis, with only one death. If the authors had limited themselves to acute gangrenous cholecystitis, the mortality would undoubtedly have been higher. I have not been able to find any data on this subject in the literature.

For this study I have grouped the mortality data under four heads:

- 1. The clinically acute cholecystitis.
- 2. The clinically subacute cholecystitis.
- 3. The surgical subacute cholecystitis.
- 4. The surgical acute gangrenous cholecystitis.

1. *The Clinically Acute Cholecystitis.*—There were eighteen cases of definitely acute cholecystitis in the first group that were not subjected to surgery. All these patients were acutely ill, with fever, leukocytosis, and localized right costal margin rigidity. These patients were treated conservatively by bed rest in the Fowler position, ice bags, and morphin. Four deaths occurred (mortality 22 per cent), two from ruptured gall

TABLE 3.—Acute Gangrenous Cholecystitis—Operative Results

	Hospital Stay		Drains Removed	Persisting Drainage	Average Hospital Stay
	15 days or less	30 days or more	6th day or less	3 weeks or more	
Cholecystectomy	18%	18%	41%	6%	24 days
Cholecystostomy	0	50%	0	20%	35 days

TABLE 4.—*Acute Cholecystitis—Mortality*

Pathology	No. of Cases	Operative Procedure	Mortality	Cause of Death
Clinically advanced acute cholecystitis	18	None	4 (22%)	2 ruptured gall bladders
Acute abdomen? Gall bladder	9	Immediate exploratory	1 (11%)	2 ruptured gall bladders (?) 1 ruptured gall bladder with advanced cancer pancreas
Clinically subacute cholecystitis	40	None	2 (5%)	1 ruptured duodenal ulcer 1 hemorrhage into thymus 3 cholesterin stones
Acute on a ch. chol. Acute hydrops Acute empyema Perforations (2)	9	Immediate cholecystectomy	0	
Subacute on ch. chol. Subacute hydrops Subacute empyema "Normal" gall bladder	30	Cholecystectomy Not immediately	1 (3%)	1 pneumonia
	1	Exploratory	0	
Acute gangrenous cholecystitis	38	Cholecystectomy 22 (18%) Cholecystostomy 16 (37%)	10 (26%)	

bladders and two supposedly from ruptured gall bladders not proved by autopsy.

There were nine acute abdomens in this first group, none of which were definitely diagnosed cholecystic in origin, preoperatively. One of these patients died from a ruptured gangrenous gall bladder superimposed on an advanced carcinoma of the pancreas (mortality 11 per cent).

There were sixteen cases of clinically acute cholecystitis in this first group that did not seem severe enough to require immediate surgical intervention. Most of these patients were operated upon a week or so later. There was no mortality in this group.

2. *The Clinically Subacute Cholecystitis.*—There were forty cases of clinically subacute cholecystitis in the second group. None of these patients were operated upon. Two deaths occurred, one from ruptured duodenal ulcer, undiagnosed. The other death was that of an infant of three months of age that seemed to have a subacute abdominal lesion. She died of a hemorrhage into the thymus. The abdomen was normal except for three faceted cholesterin stones in a thin-walled inflammatory-free gall bladder (mortality five per cent).

Six of the patients left the hospital complaining of more or less vague abdominal distress, or the x-ray showed "diseased gall bladders," and they were considered clinically unimproved even though they had been relieved of their acute distress. The remaining thirty-two patients were dismissed as improved.

3. *The Surgical Subacute Cholecystitis.*—The third series consists of a group of forty cases considered acute cholecystitis and operated upon within twenty-four hours after admission into the hospital. Nine of these were definitely acute exacerbations of chronic cholecystitis, empyema, or hydrops with fibrin coating the serosal surface of the gall bladder but not showing any diffuse gangrene. Two of these had perforated

with localized abscesses adjacent. Cholecystectomy was performed in all of the nine cases without mortality.

There were thirty cases of subacute cholecystitis or subacute exacerbations of chronic cholecystitis, empyema, or hydrops that clinically seemed acute. Laparotomy was performed in all of these with one death (mortality three per cent). That patient had a subacute exacerbation of a chronic empyema with stones, and died on the fourth day postoperatively of pneumonia. One patient in this group was operated upon for a clinically acute cholecystitis, but the gall bladder was grossly normal and no other abdominal pathology could be found. This patient was "not improved."

4. *The Surgical Acute Gangrenous Cholecystitis.*—The mortality in the fourth group was, of course, the most interesting. There were thirty-eight patients in this group, all operated cases of acute gangrenous cholecystitis. There were ten deaths (mortality 26 per cent). This rate compares favorably with the group of eighteen clinically acute cholecystitis patients who were very ill and not operated upon where the mortality was 22 per cent. These latter patients were treated conservatively in conformity to the opinions of many surgeons who advise conservative treatment for all early acute gall-bladder lesions. If these patients could have been brought into the hospital earlier in the course of their biliary disease, many of them would have been operated upon, for some were moribund on entrance. Others were considered early perforations with localized peritonitis and they were treated conservatively until the inflammatory process could be walled off. It is impossible to estimate the type of pathology present in these eighteen cases except for the four patients who died. Two of these were proved ruptured gall bladders with areas of patchy gangrene, and two were presumably acute gangrenous cholecystitis, but not proved by necropsy.



TABLE 5.—*Acute Gangrenous Cholecystitis—Mortality*

Operation	No. of Cases	Days or Hours Postoperative	Cause of Death (Autopsy)
Cholecystectomy	1	1 day	Pericarditis with effusion
	1	2 days	Pericarditis with effusion
	1	1 day	Pericarditis with effusion and bronchopneumonia
	1	3 days	Pulmonary edema and multiple abscess of liver
Cholecystostomy	1	2 hours	Bilateral pyothorax
	1	12 hours	Acute dilatation heart; peritonitis
	1	3 days	Peritonitis
	1	6 days	Obstructive jaundice, common duct stone
	1	7 days	Pneumonia
	1	12 days	Common duct stones, enteritis and fatty heart

The remainder were presumably not gangrenous and probably not perforations inasmuch as they recovered.

The thirty-eight cases considered in the fourth group, however, were proved cases of acute gangrenous cholecystitis subjected to surgery, and the mortality in these is considerably less than might be expected. This mortality rate is almost wholly due to delay, for if these patients had been seen earlier by a surgeon, most of them at least would have been operated upon much sooner. They add a plea for early intervention in acute cholecystic lesions. I believe that conservative, nonoperative treatment is advisable in all cases of acute gall-bladder disease provided the patients be under constant surveillance. The majority of acute biliary disturbances are not operative, and those that are can be best handled in the subacute stage. But a certain group, of which these thirty-eight cases are the outstanding examples, will need immediate surgical intervention. This group can be distinguished from the previously cited cases of acute and subacute cholecystitis only by constant surgical observation.

The patients on whom a cholecystostomy was performed were as a rule more acutely ill than those that had a cholecystectomy. That accounts for the difference in the mortality in these two groups; for the former was 37 per cent while the latter was only 18 per cent. We cannot conclude from this data that cholecystectomy is the operation of choice for acute gangrenous cholecystitis, but these facts coupled with others previously given warrant serious consideration in favor of cholecystectomy.

The cause of death in the ten operated cases of acute gangrenous cholecystitis was established by autopsy, and is given in Table 5. Two patients died of pericarditis with effusion; two of bronchopneumonia, in one of whom it was recognized before surgery; one of pulmonary edema; one of bilateral pyothorax; two of peritonitis; and two of liver insufficiency secondary to common duct stones.

SUMMARY

1. There are two schools of therapy for the treatment of acute cholecystitis—the radical and the conservative.
2. The attitude of seven local surgeons has been definitely conservative.
3. One and a half per cent of the admissions to the San Francisco Hospital were for cholecystic disease; 31 per cent of these were operated upon.
4. Seventeen per cent of the hospital admissions for cholecystic disease were for acute cholecystitis. Twenty-three per cent of these (thirty-eight cases) were proved cases of acute gangrenous cholecystitis.
5. Gall stones were present in only twenty-eight of the thirty-eight gangrenous specimens.
6. The present attack initiated the first symptoms of cholecystic disease in eight of the thirty-eight patients.
7. A diagnosis of acute cholecystitis was made in all but six of the thirty-eight patients.
8. All but one were operated upon within a few hours after entrance into the hospital.
9. Cholecystectomy was performed in twenty-two cases and cholecystostomy in sixteen.
10. The duration of convalescence and the time spent in the hospital were considerably less for the cholecystectomized patients.
11. The mortality in nonoperated acute cholecystitis cases was 22 per cent.
12. There was no mortality in sixteen patients that were operated upon a few days after the acute symptoms had subsided.
13. The mortality in forty nonoperated cases of subacute cholecystitis was five per cent.
14. There were no deaths in nine surgical cases of nongangrenous acute cholecystitis.
15. The mortality in thirty-eight cases of acute gangrenous cholecystitis was 26 per cent.

CONCLUSIONS

1. The treatment of acute cholecystitis should be conservative if the patient is under constant observation.

2. Immediate surgical intervention is indicated if the patient does not respond to conservative hospital care.

3. There is a need for a better classification of acute cholecystic disease.

4. Acute gangrenous cholecystitis may be the primary and initial manifestation of biliary disease.

5. Gangrene of the gall bladder may develop slowly without manifest signs.

6. Cholecystectomy, when possible, is the operation of choice for acute gangrenous cholecystitis.

Four Fifty Sutter Street.

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#### DISCUSSION

STEWART LOBINGIER, M. D. (716 Merritt Building, Los Angeles).—It is exceedingly difficult in the brief time allotted me to adequately discuss a paper of such outstanding merit. It will pass into the literature as a distinctive contribution and be widely quoted.

In any case of positive obstruction of the cystic duct there will be infection and edema. If the obstruction by any means is relieved, the edema will not go on to necrosis. When necrotic edema is well established it goes on to gangrene unless arrested by operation. True and complete gangrene of the gall bladder is extremely rare in this country—a tribute to early diagnosis. It is a lethal condition and should be wholesomely feared.

Many of the cases of so-called empyema associated with acute cholecystitis will subside and clear up if and when the obstruction in the cystic duct is relieved. The pus drains away and symptoms of infection disappear. But if this pathologic cycle is oft-repeated, as it may be, the gall bladder wall may become greatly thickened from hyperplasia between the mucosa and muscularis. Necrotic edema never occurs in such a gall bladder because the arterial distribution is too well protected from pressure in the cystic duct. There may be a succession of acute infections of such a gall bladder without ever passing on to necrotic edema or gangrene. In all cases of acute cholecystitis, where the clinical symptoms indicate necrotic edema as the probable issue, we feel we do not dare to temporize, but operate promptly, draining the edematous and infected liver through the gall bladder antrum and cystic duct.

But if the surgeon knows his patient has simply acute catarrhal cholecystitis or acute so-called empyema of the gall bladder, we agree with the author that we may wait, for these conditions may and frequently do subside and the patient recovers from the attack without operation.

We find some difficulty, however, in this admirable study of acute gall-bladder infection, in the acceptance of the large number of thirty-eight cases classified as acute gangrenous cholecystitis, a difficulty which the author himself recognizes in the early portion of his discussion; we agree with him that this must be due to "the variations in classification and the personal element in interpreting the pathology of acute cholecystitis."

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O. O. WITHERBEE, M. D. (909 California Medical Building, Los Angeles).—Doctor Mentzer's paper on acute cholecystitis and its surgical treatment, presents a subject of great interest and one which cannot be briefly discussed in all its phases.



The consideration of greatest importance is that of diagnosis. Clinical manifestations are often misleading, and even though they seem, in most cases, to accurately correspond with pathologic changes, we usually hesitate to go on record further than to recommend either a period of observation or immediate surgical interference.

Granted, that we have a case of cholecystitis, the question immediately arises: "Is it an acute condition or an acute exacerbation of a long-standing inflammatory process?" Patients, half in fear, are often very reticent in giving us a complete history. Negative answers are frequently given, only to be contradicted later on, after a successful surgical procedure has been done. The character and duration of symptoms are often too varied to make a positive diagnosis, while the x-ray and laboratory findings are as a rule only suggestive. The clinical manifestations must be our guide whether these are, or are not, supported by the laboratory, the x-ray, or even the history itself.

A definite surgical abdomen calls for immediate interference, which must be undertaken unless the patient is moribund; otherwise a period of observation, with a most careful analysis, should be advised.

Doctor Lobingier, in his discussion, says, that if the surgeon knows his case is simply acute cholecystitis, he agrees with the author, that we may wait; in other words, were it possible to visualize the pathology in every case of acute cholecystitis, its diagnosis and treatment would at once become classic.

In Doctor Mentzer's series he mentions eight cases of gangrenous gall bladder in patients who vigorously denied ever having any stomach trouble or other symptoms suggestive of biliary disease. The majority, however, had gastro-intestinal distress for many years, and most of these had the characteristic signs and symptoms of cholecystic disease for long periods. The doctor is certainly to be congratulated on his ability to correctly diagnose thirty-two of the thirty-eight cases he mentions. A case demanding immediate operation is usually regarded as a surgical abdomen, and the word "exploratory" modifies in a measure the feeling of responsibility that rests upon the surgeon at such a time.

I was recently called by Doctor Churchill to San Diego, in the night, to the bedside of my own brother who had very suddenly developed an acute abdomen. He was a very sick man. A terrific pain had struck him in the upper abdomen that evening. Except for an attack of angina three or four years before, he had not the slightest indication of impaired health. At the time, we found him with abdomen distended, muscles rigid, pulse quickened, temperature elevated, and with a leukocytosis of 36,600. What was to be done? Plain enough. Exploratory. What did we find? A phlegmonous gall bladder surrounded by a plastic exudate, bathed in a creamy pus. He is here this afternoon, is seventy-six years old, and will stand up for your inspection.

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HAROLD BRUNN, M. D. (384 Post Street, San Francisco).—Doctor Mentzer has done for us a great service in collecting this group of cases and in gathering together the literature on this subject. It is necessary that we from time to time look back upon our difficulties and evaluate our results.

As I have seen this disease, it appears to me that there are two distinct types of cases which lead to gangrene of the gall bladder.

The one type is due to a sudden blockage of the arterial supply and may come on during the course of even a mild gall bladder attack.

The other type is the result of a virulent inflammation of the gall bladder walls which causes gangrene and necrosis as a result of blocking of many capillaries, but is not in the same sense a thrombosis of the main stem.

In this latter case I feel that mistakes are not so likely to be made as the symptoms are fulminant, the patient is very ill, the acuteness of the disease does not brook delay, and the surgeon is forced to operate

on account of the severity of the symptoms. In the other type of case the indications are not so evident. The easy onset and perhaps the sharp pain which comes on at the time of blocking of the artery may pass off into a period of apparent quiescence, because sudden gangrene of the gall bladder, as in certain cases of gangrene of the appendix, may for a period of time give very few symptoms, and the laboratory findings are also not at all in line with the picture that one sees upon operation. It is in this type of case that mistakes can easily be made.

The policy of delay which most surgeons adopt in caring for cases of acute cholecystitis carries with it a very considerable danger, and one should always be on guard in recommending such delay, having in mind the possibilities of a gangrene due to a thrombosis of an artery.

As to treatment, we believe that, other things being equal, it is preferable to remove the gall bladder, but we have no hesitancy at any time in individual cases, because of the serious condition of the patient or the technical difficulty of the operation, and especially in the face of a streptococcal infection, to avoid a major procedure and be satisfied with a cholecystotomy.

There are many interesting points in the summary which Doctor Mentzer has drawn up which are well worthy of study. I believe he has stated very tersely the principles on which our judgment is based at the present time.

## INDIRECT TREATMENT OF A PRESUMABLY SYPHILITIC CHILD BY MATERNAL THERAPY DURING LACTATION\*

### REPORT OF CASE

By H. SUTHERLAND CAMPBELL, M. D.

AND

KENDAL FROST, M. D.

Los Angeles

DISCUSSION by Harry E. Alderson, M.D., San Francisco; Ernest Dwight Chipman, M.D., San Francisco; H. J. Templeton, M.D., Oakland.

ON February 3, 1927, a woman, age forty, presented herself at the Santa Rita Clinic, stating she was pregnant, approximately the eighth month, and that she was "frightened for the child because the two other children got sick after they were born, and there was something wrong with their teeth." The clinic records showed that this woman had been given a short and spasmodic course of antiluetic treatment eighteen months previously. It was later learned that she would not attend regularly, and that her children had also been under treatment for congenital lues.

### REPORT OF CASE

*Maternal History.*—Married at nineteen years in Bucharest. Six weeks later developed primary lesion. Was treated at the hospital "by needle, in the buttocks, for thirty days." Sore healed. She stated this form of treatment was the regular system in vogue in Bucharest at that time. Returned home, and soon became pregnant. An abortion followed at the fifth month. Some time later again became pregnant. Child was stillborn at the seventh month. The husband was informed that he had syphilis, but refused treatment. He died after having been married two years, of (?) paralysis. Approximately two years after the thirty-day treatment in the hospital, she took six weeks of mercury rubs at home once a year for five

\* Read before the Dermatology and Syphilology Section of the California Medical Association at the fifty-eighth annual session, at Coronado, May 6-9, 1929.



years. She remarried seventeen years ago and had no further treatment. She became pregnant and was delivered of a baby girl at full term who seemed healthy until three weeks old, when she had "a rash on the buttocks and colds in the head."

Was given some salve to apply (not a rub) and it gradually cleared up. Nothing further was noted until at about one year of age the teeth began to get black and early rotted away. No new teeth appeared until child was seven and one-half years old. These were small and did not grow. Child was apparently well until three years ago, when her blood was examined and gave a four-plus reaction. Two abortions followed this child, both at the third month. Then she was delivered of a full-term child, seven years after birth of first child. This baby, from the description, was hydrocephalic and lived only twenty-four hours.

Two years later a full-term male child was born, approximately nine years after birth of first living child. This baby was perfectly well at birth, but at six weeks developed a cold in the head and an eruption on palms and soles of feet, which was not diagnosed for some four months, when treatment was instituted. The child's Wassermann was four plus at this time. The mother and child then began treatment which was kept up in irregular fashion for some six months. From October 1923 to May 1924 the mother had a total of eleven neosalvarsans. Following this she had no treatment. Her blood Wassermann August 20, 1925, was plus-minus. On February 3, 1927, her Wassermann was plus-minus.

It was decided that we would administer intramuscular therapy rather than intravenous at this stage—the eighth month of pregnancy. We therefore gave her three intramuscular injections of salicylate of mercury, grains one, at weekly intervals. About four weeks later patient returned with an apparently healthy child, which had been born on March 4, 1927.

At this time, in the face of no slight degree of criticism, we commenced the indirect intravenous therapy, using neoarsphenamin alone, as we lean favorably toward the conclusions of Schamberg,<sup>1</sup> namely, that there is relatively much less danger of toxic manifestation when one uses arsphenamin alone than when one combines it with the use of mercury.

The mother was given 0.15 gram of neoarsphenamin, increasing to 0.6 the fourth week, and thereafter the regular weekly treatments of 0.6 neoarsphenamin were given for nine months. Following this, weekly treatments of intramuscular sulpharsphenamin were given for five months. During this time she experienced no distress and felt quite well. She was fortunately able to nurse the baby during the entire time. Weaning was done gradually, supplementing her regular meals with the breast feeding until she was about fourteen months old. During this entire time it will be noted the mother was receiving medication. The child's serologic reaction at periodic intervals has remained negative. The mother's Wassermann has remained plus-minus throughout.

**Synopsis of Pregnancies and Therapy.**—A synopsis presents the following facts:

Mother acquired syphilis at nineteen years of age. Thirty-day intramuscular therapy.

First pregnancy: abortion fifth month.

Second pregnancy: stillborn seventh month.

First husband died.

Six weeks' mercury rubs once a year for five years.

Third pregnancy (by second husband). Full-term living child, syphilitic.



Fig. 1.—First living child. Female. Age, sixteen years. Wassermann, four plus.

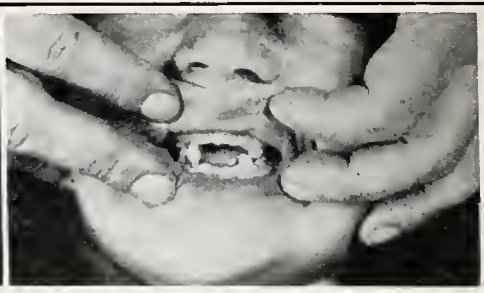


Fig. 2.—Second living child. Male. Age, seven years. Wassermann, four plus.

Fourth pregnancy: abortion third month.

Fifth pregnancy: abortion third month.

Sixth pregnancy: full-term male child, syphilitic, living.

Seventh pregnancy: full-term living male child; hydrocephalic. Lived twenty-four hours.

Eleven neoarsphenamins over period of eight months, then no treatment until February 3, 1927.

Eighth pregnancy: full-term living female child, nonsyphilitic.

**Report on Condition of Child at Two Years of Age.**—The following is the report by Dr. M. J. Scholl on the child at two years of age:

**Birth History and Development.**—Approximately ten days premature. Cephalic presentation with easy, normal labor. Baby cried instantly after birth. Entire left side of the body was "blue and cold" for two weeks. The mother had bronchitis at the time of delivery and the baby contracted an upper respiratory infection from her which lasted three days. Birth weight, eight pounds. At six months, eighteen pounds. At one year, twenty-one pounds. No history of snuffles, skin rash, fissures, or condylomata. Dentition began at eleven months. Lateral incisors were cut at thirteen months. First molars at twenty months. She sat up alone at eight months, walked at ten months, talked at eighteen months.

**Feeding.**—Breast-fed exclusively for approximately nine months. After this had various additions to diet until she is now on a general diet.

**Diseases.**—Has never been ill.

**Habits.**—Appetite has always been good. No constipation or diarrhea. Sleeps quietly. No urinary symptoms. Good-natured, placid disposition.

**Physical Examination.**—Height, 34 inches. Weight (stripped), 26¼ pounds. Normal weight, 27 pounds. Temperature (rectal), 99. Pulse, 92. The patient is a well developed, well nourished female child of healthy appearance, and bright mentally. Posture is excellent. The skin is soft, smooth and free from rash. There is no evidence of rhagades. The mucous membranes of nose and mouth are pink and healthy. Eyebrows are thick. Eyes: Pupils are equal and react to light and accommodation. No scars are present. Nose: Contour normal. There is a slight serous nasal discharge present in the anterior nares (child contracted cold one week ago). Mouth: Twelve teeth are present; normal shape and intact enamel. No caries. Tonsils: Grade 2 (on basis of grades 1 to 4), cryptic and slightly injected. A small amount of mucus is present on the posterior pharyngeal wall. Ears: A small amount of cerumen is present in the canals. The drums are white and glistening. The light reflex is present. Glands: The lymphatic glands in the anterior cervical triangles are the size of small peas, and firm. Other cervical glands are not palpable. The axillary, inguinal, epitrochlears, are not palpable. Chest: Contour normal. No Harrison's grooves or rachitic rosary felt. Lungs: Equal expansion on both sides with normal tactile fremitus. Percussion note is resonant throughout. Breath sounds are clear. No adventitious sounds. Heart: Borders are within normal limits. No thrills. Valve sounds are clear and of good quality. Rhythm is normal. Abdomen: Soft



and not protuberant. No tenderness is elicited. Liver and spleen are not palpable. No masses can be felt. Genitalia: Externally no inflammation or discharge is seen. No genital malformations. Anal orifice is smooth. The sphincter is normal. No growths or scars are present. Extremities: There are no skeletal deformities. The joints function properly. The nails are present, smooth and of normal contour. The spine is negative. Reflexes: All reflexes are present. Babinski is negative.

**Impression.**—A child of normal physical and mental development for her age—two years—with no evidence of congenital syphilis.

#### COMMENT

An attempt to recapitulate the various considerations for the justification of our method of procedure, which to some of our colleagues has seemed somewhat lacking in foundation, is beyond the scope of this paper. It is therefore our purpose, insofar as we are able, to confine ourselves to the most salient facts concerned, and to attempt to consider fairly and in as concise a measure as possible, the conflicting opinions of others.

Primarily, we are confronted with a woman in the eighth month of pregnancy. Her history and the physical stigmata of her only living children all prove her to be syphilitic, and while we are aware that both the mendelian and the mosaic theories are far from being applicable in the case of syphilis, we have nevertheless some small degree of reason to believe that the child will not escape the disease. As the mother has been afflicted for a lengthy period of time, it may be in order to recall the opinion of Kassowitz,<sup>3</sup> who stated that "the virus of syphilis gradually becomes attenuated." Many other observers of great clinical experience express themselves as dissatisfied with these conclusions (Gammeltoft,<sup>2</sup> Buschke,<sup>4</sup> Rasche,<sup>5</sup> Nobel<sup>6</sup>). Gammeltoft,<sup>2</sup> in a recent article, cites two cases in a series, one born ten years and the other twenty years following infection. Both of these mothers were treated intensively with salvarsan and mercury in the first years following infection, but had had no recent therapy. Assuming, therefore, that this child is a potential syphilitic, what justification have we in not treating both the mother and the child directly as we were advised, and as has been done in most instances in the past?

Concerning this situation, we find that various authorities have widely different opinions. There

are some who advocate that every child of syphilitic parents should receive direct treatment, even though they do not present any evidence whatsoever of syphilis. Others advise treatment only in the case of children born of mothers with recent syphilis, though they show no signs of the disease. Others again, and among them Gammeltoft,<sup>2</sup> Ahmann,<sup>7</sup> and Almkvist,<sup>8</sup> who believe that suspected children should not be treated before they show clinical signs of the disease or manifest a positive Wassermann; but that they should be constantly under observation. In Gammeltoft's<sup>2</sup> series of ninety-eight cases treated by salvarsan during pregnancy, only nineteen of the children showed evidence of lues, seventy-nine being apparently healthy, and remaining so.

Almkvist<sup>8</sup> states: "It has always been considered unscientific procedure in cases of acquired syphilis to start treatment before definite symptoms establish the diagnosis, and I cannot see that this procedure is less scientific simply because it involves little children instead of adults."

The results of intensive and direct therapy on the congenital syphilitics in our hands has left much to be desired. In some instances, in the reluctance of serological change; in others, in the recurrence of evidence of activity following rest periods. These findings are upheld by clinicians of much greater experience. Leonard Findlay,<sup>9</sup> whose opinion is both valuable and conservative, states: "The treatment of congenital syphilis is, if not a failure, at least a great disappointment." The consensus of opinion appears to bear out Findlay's conclusions.

#### TOXICOLOGIC ACTION OF CERTAIN DRUGS

We shall now consider a phase of the situation which has received but scant consideration, *i. e.*, the toxicologic action of the metals employed. For some time previous to the experiments of Kolmer and Lucke,<sup>10</sup> it had always been a debatable question at postmortems as to whether the disease or the metal was responsible for the parenchymatous degeneration found in essential organs. These men demonstrated that arsenic and mercury, even in small doses, produced degenerative changes in the organs of normal animals. Schamberg,<sup>11</sup> in a consideration of the above experiments, states: "Both arsenic and mercury administered in therapeutic doses bring about structural alterations in organs, arsenicals affecting the liver, suprarenals and blood vessels, mercury having an affinity for kidneys and brain. Syphilitic treatment requires repeated use of these drugs. When used with circumspection, harmful results may be avoided. When used otherwise, unfortunate results may take place. Fatalities

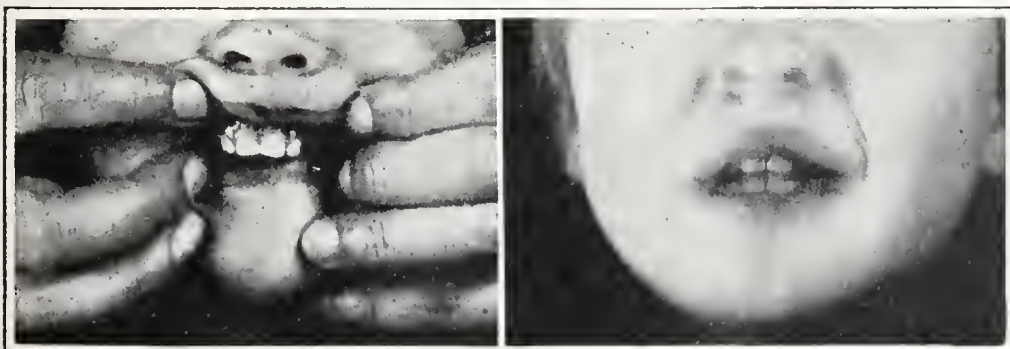


Fig. 3. Third living child. Female. Age, two years. Wassermann, negative. Milk-teeth structure only of interest in point of mother's statement that both previous children had delayed dentition with early necrosis and loss of teeth.

Fig. 4.—Same as Fig. 3.



have occurred after both arsenic and mercury. Many scores, if not hundreds, of deaths after mercury have been reported."

In this connection Brown<sup>12</sup> states: "The determination of toxicity of new compounds for experimental animals, insofar as duration of life is concerned, is insufficient, and the question of tissue injury has not attracted the attention that the subject deserves."

The degree of repair of the degenerative changes in these essential organs is fortunately sufficient in most cases to make the structural changes negligible in point of interference of perfect functioning, but we should not lose sight of the fact that any added strain upon those organs, which would undoubtedly ensue during a possible later intercurrent infection, would be attended by an element of grave danger. One is, we think, justified in wondering whether this early tissue damage might not be one of the factors which tend to produce the mortality percentage among the treated congenital syphilitics.

While some maintain, and we believe it reasonable to suppose, that a syphilitic would offer a greater degree of resistance to the metals than would a normal individual, we think we are justified in assuming early tissue damage in essential organs in the treated syphilitic child, the degree of damage being fairly proportionate to the dosage. We feel, in face of this evidence, that the method of body weight determination of dosage of the metals, while being well tolerated in an adult, is too crude in the case of a very young child.

In view of these opinions, we have felt that a Wassermann-fast reaction in a child following adequate therapy is scarcely sufficient justification for the continuous and sometimes intermittent long-drawn-out therapy which often obtains as a matter of routine.

It is well known that most drugs having a destructive effect upon a parasite exert a similar action, but in much lesser degree, upon the host. Therein lies the justification for their use, but if the pharmacologic action of a drug has been demonstrated to have very little effect upon the parasite over a measurably adequate period of time, and we feel that the toxicologic action is being continued, it seems illogical to prolong its use. The inclination on the part of some clinicians, in the face of no response is, unfortunately, not to stop therapy, but rather to increase it.

#### REASONS FOR INDIRECT THERAPY

This child after birth manifested no clinical evidence of lues, and this was supported by a negative Wassermann. We hesitated to assume the responsibility of not giving a possibly latent syphilitic treatment, though many able men advise that course of procedure. Conversely, we were just as reluctant about giving direct therapy, primarily because of our convictions regarding early tissue damage, and, secondly, because we would by so doing classify this infant for the rest of her life as a syphilitic. We therefore determined to treat the child indirectly, by administering arsenic intravenously to the mother during the

entire period of lactation, not only for the therapeutic effect of the arsenic, but also in the hope that some passive immune body formation might be supplied to the child, for it must be admitted that immune body formation, if it exists, must be highly developed in this mother.

The consensus of opinion seems to favor a direct spirocheticidal action on the part of the arsphenamin, and it denies the immune body formation theory. However, it would be well to remember that nothing is definitely known regarding the action of the arsphenamin in the body. Briefly considered, Voegtlin's<sup>13</sup> theory is that the arsenic linkage is broken, and arsenoxid is formed. This toxic substance finds a physiologic antidote in the shape of reduced glutathione, a substance found in muscle tissue and liver. Arsenoxid combines with this substance, and is held back by the body tissues. Whether the arsenic is further oxidized to the pentavalent organic arsenicals is unknown, but it is presumed so, as all pentavalent organic arsenicals are rapidly eliminated by the kidney. The mechanism whereby arsenoxid destroys the spirochetes appears to be the same as the one responsible for the toxic effect of arsenoxid on mammalian tissue in the absence of unreduced glutathione, *i. e.*, an effect of the trivalent arsenoxid arsenic upon some sulphydril compound occurring in the spirochete.

Voegtlin,<sup>13</sup> in a series of experiments has compiled much of interest in the matter, but rejects the theory of immune body formation on the grounds that six to eight hours is too short a period of time for their development, and arsenic injections have been shown to have spirocheticidal action within that time. The therapeutic action of the arsenicals, according to the above theory, is due to a chemical reaction—the effective lethal agent arsenoxid being prevented from harming the body tissues by (1) slowness of formation, and (2) its combination with the reduced glutathione of the tissues.

#### NONARSENICAL DRUGS

Before dismissing the matter and accepting this dictum as final, we must recognize that other substances differing widely in their composition, give somewhat similar results to the arsenicals in the matter of healing syphilitic lesions, *i. e.*, mercury, bismuth, iodid, and even protein injections. Though perhaps not so permanent in their effect, we have occasionally found the iodid salts given intravenously to have even more effective involuting action in the case of tertiary lesions than the arsenicals. Are we, therefore, to believe that all these various agents have a similar chemical reaction in the body?

#### ACTION OF THE DRUGS

It seems to be just as feasible to suppose that these agents destroy the spirochete by provoking or stimulating the body tissues to a relatively high immune body formation, as that it is due to destruction by direct chemical combination. To our minds, the time of production of immune bodies dates from the inception of the spirochete,



and the later injection of arsenic merely serves to increase them. V. H. Park,<sup>14</sup> quoting Fisch and Stewart, states: "Seventeen apparently healthy infants failed to show any signs of syphilis, although their mothers were in the most contagious phase of florid syphilis. Immunization by way of placenta before birth, or by suckling afterward, will have to be accepted in these cases, according to the authors."

We must confess to leaning strongly toward the views of the minority and have a firm conviction that immune body formation plays an important rôle in the matter. If we correctly interpret the disease, every one of the various physical phenomena from primary chancre to tertiary lesions is merely an external and visible sign of the warfare which is being waged by the body. If one denies immune body formation, how does one account for the fact that the arsphenamins are useless in cases of malignant syphilis, or that the mother of these children has enjoyed good health all her life, and is today, as far as it is possible to determine, physically well? She has had, it is true, throughout the time she has been under observation, a plus-minus Wassermann reaction, but this we understand to be interpreted as negative, in the absence of other evidence. The only positive evidence we have that she is a syphilitic is that made manifest at every pregnancy, and in the stigmata of her two older living children. Many similar cases are known to you.

It was shown in 1838, by analysis, that the milk of women taking arsenic preparations contained arsenic. During that year Thompson, after a series of experiments on the physiologic action of iodid of arsenic on experimental animals concluded that arsenic was found in all the secretions; when administered during lactation, it furnished a convenient manner of giving it to infants at the breast through the milk of the mothers, and that when used internally for long it accumulated in the system.

One might claim that no therapeutic action follows oral administration. Schamberg<sup>11</sup> states: "The oral administration of arsphenamin was shown to be followed by absorption" and Kolmer<sup>10a</sup> ranks the absorption of arsenicals administered by mouth as higher than that which follows rectal administration.

Fordyce, Rosen, and Meyer<sup>15</sup> states: "The ingestion of milk from treated patients has raised this question in our minds, as to the possible therapeutic value of arsenic so received, and also its possible detrimental effect in producing a tolerance to arsenic on the part of the nursing child.

Noguchi and Klauder<sup>16</sup> demonstrated a developing resistance to arsenic in both strains of pallida by administering very small doses of arsenic to rabbits, transferring the strain to other rabbits and gradually increasing, until a 68 per cent resistance to arsenic was obtained.

It would appear that we are justified in believing that direct therapy to the child, judging by the results obtained clinically, is ineffective in coping with a spirochete which has in most instances already been subjected to the action of

a comparatively higher dose of the metal while in a former host (maternal) and in all probability in a less resistant state.

And presuming that this increased spirochetal resistance obtained in this child, the difference in dosage, direct or indirect, would make but little difference to the end result unless, as we believe, passive immune body formation was also being supplied. In that case, if our conviction be correct, indirect therapy would probably prove the more efficacious. We do not presume to prove anything by this paper, as we start with an unknown premise. We have no means of knowing whether this child would have developed syphilis. We have known many cases of normal children born of syphilitic mothers that have remained so, but we think sufficient justification for its presentation lies in the fact that it offers a method of treatment for those who very rightly hesitate to subject an apparently normal child to direct anti-syphilitic medication, and yet are loath to refuse treatment in the face of the possibility of positive signs of syphilitic activity developing at a later date.

1930 Wilshire Boulevard.

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#### DISCUSSION

HARRY E. ALDERSON, M.D. (490 Post Street, San Francisco).—We have been able many times to observe the benefit derived by the nursing syphilitic infant whose mother was given neoarsphenamin, and feel that it is a valuable method. Certainly, in this case reported by Campbell and Frost, no harm was done, and even though it is possible that the child might have remained well without the treatment, it was the duty of the physicians to make every effort to prevent future trouble. Delayed manifestations of congenital syphilis are only too common. At the Stanford skin and syphilis clinic we frequently treat pregnant syphilitics and we always administer neoarsphenamin and bismuth, continuing the same during the nursing period.



ERNEST DWIGHT CHIPMAN, M.D. (350 Post Street, San Francisco).—This paper deals with a problem that is rich in both medical and human interest. The authors set up no claim that their solution is the only one or the correct one.



A syphilitic mother may, of course, begin with miscarriage at the first or second month, pass through progressively longer terms of pregnancy until full term syphilitic offspring issue. Finally, if persistent enough, she may bring forth full-term progeny free from clinical stigmata and serologically negative. It is such a case as this last that is under discussion.

There are three possible ways of meeting the situation, viz.: first, with direct, active treatment; second, with no treatment at all; third, with a compromise by indirect treatment through the maternal milk. In making a decision, the question largely resolves itself into this: Are we justified in the administration of toxic and potentially harmful substances into the circulation of any subject, adult or infant, on the mere presumption that he is syphilitic? My own view is that treatment should never be undertaken in the absence of both clinical and serologic indications, subject of course to the reservation, in the case of infants, that one is in duty bound to follow the case as closely as possible lest late, hereditary stigmata develop.

In this particular case, even though in the title the authors use the term "a presumably syphilitic child," I do not feel sure that the presumption of syphilis is justified. A subject is or is not syphilitic, and in the absence of both clinical and serologic evidence it does not seem to me that we are warranted in saddling a diagnosis of syphilis upon one even though his mother and "his sisters and his cousins and his aunts" are infected.

With respect to treatment the authors decided upon a middle course and whether the child would, or will, ever develop definite stigmata or positive blood reaction, we shall perhaps never know. It is noteworthy, however, that the physical findings at the end of two years revealed nothing which could be attributed to adverse result of treatment.

It would be interesting if in the treatment of frankly syphilitic infants the results of direct and indirect therapy might be compared not only with respect to serologic and clinical response, but to the general physical condition after two years or more of treatment.

The authors are deserving of praise for a paper rich in thought and philosophical flavor that should prove a stimulus to every one of us.

✽

H. J. TEMPLETON, M. D. (3115 Webster Street, Oakland).—The authors of this paper have given us considerable food for thought and at the same time have reopened the discussion of an old problem, viz., in regard to the desirability of treating an apparently normal child of a syphilitic mother. This question has been debated in dermatologic circles for many years, but we are still only able to say, as did Omar Khayyam, "and heard great argument, but evermore came out by the same door wherein I went."

The conservative school believes that, just as we never treat an adult for syphilis until a positive diagnosis has been made, we should never treat the child of a syphilitic mother until we can definitely prove that it has the disease. The authors followed this conservative course and their judgment would seem to have been vindicated by the excellent result which they obtained, the child being clinically and serologically well at the age of two years. And yet, one may be permitted to speculate as to what will happen to this child in future years. Stokes has said, "Infants who appear well and perhaps respond negatively to the earlier Wassermann tests may, in later life, under the influence of trauma, lowered resistance, and the onset of puberty, develop active and unmistakable signs of the disease."

It is my belief that no definite rule can be laid down for the treatment or withholding of treatment of the normal baby of a syphilitic mother. Each case must be determined on its individual merits. Thus, if the child has been born many years after the date

of the mother's infection, if her Wassermann is only weakly positive and she presents no clinical evidence of syphilis, and if she has given birth to other apparently normal children, one would be justified in withholding treatment. On the other hand, if the mother's infection is of a comparatively recent date, if her Wassermann is strongly positive, if she presents clinical signs of syphilis and has given birth to syphilitic children, I believe that her baby should be treated regardless of apparent clinical and serologic normality.

In the case which we are discussing, the mother's Wassermann was only weakly positive and she was apparently healthy. These two facts might influence us to withhold therapy. But when we note that every one of her seven previous pregnancies ended disastrously we must stop and ponder. I must confess that had I been confronted with this same problem, I would have regarded the baby as probably syphilitic and would have instituted prolonged treatment with bismuth and sulpharsphenamin.

✽

DOCTORS CAMPBELL AND FROST (Closing).—With reference to Dr. E. D. Chipman's observation:

We also feel that it would be of interest to utilize this mode of therapy on the frankly syphilitic child. Only in this manner could its value be determined, and while at the outset it would seem a very radical departure, the results of direct medication would appear to warrant it and are, without doubt, a justification for its trial.

One must realize at the outset, however, that this method has its limitations, namely, that the mother must be able to breast-feed the child; she must be able to tolerate the drug, and we would emphasize the necessity of keeping a careful and constant check on the mother during the entire time she is under therapy, stressing that she should report anything untoward that may occur, however slight it may seem. The length of time the mother has to be kept under weekly treatments constituted in our minds the greatest drawback to this mode of therapy. However, this patient tolerated the drug well for some fourteen months, and has been perfectly well ever since. This is a moot question, and to us one which time and experience alone can answer.

## PEPTIC ULCER—ITS MANAGEMENT\*

### REPORT OF CASES

By GRANT H. LANPHERE, M. D.

Los Angeles

DISCUSSION by Frederick A. Speik, M. D., Los Angeles; Henry Snure, M. D., Los Angeles; Paul B. Roen, M. D., Hollywood.

THE management of peptic ulcer depends upon a careful consideration of its probable location, duration and complications.

Ulcers of the stomach and duodenum are fundamentally alike. Such differences as exist are due very largely to the complications peculiar to the stomach and duodenal location of the ulcer.

The cause of ulcers of the stomach and duodenum as they occur clinically has not been satisfactorily established. It is probable that there are many factors which predispose to their formation. Two of the more recent theories are a constitutional predisposition or an irritability of the autonomic nervous system associated with chronic oral sepsis, and foci of infection which are drained by the portal vein.

\* Read before the General Medicine Section of the California Medical Association at the fifty-eighth annual session at Coronado, May 6-9, 1929.



## SYMPTOMS

The symptomatology of well established ulcer is quite characteristic. The start is usually obscure, due no doubt to the fact that in the beginning and before the ulcer has eroded through the muscular and serous coats and involved the peritoneum, the disturbance is slight.

A detailed account of the distress symptoms as they appear during a usual twenty-four-hour period, is of vast importance. When ulcer is associated with the conditions essential to the production of clinical manifestations, subjective symptoms are often present in such characteristic form that a very probable diagnosis may be made from the clinical history alone.

The following facts are diagnostic of peptic ulcer, providing there are no definite or unexplained incompatibilities:

1. The distress of ulcer is absent when the stomach is normally empty.
2. The distress appears usually from one to three hours, and seldom as late as five hours after eating an ordinary meal. It seldom appears before breakfast unless complications are present.
3. The distress is as a rule completely relieved by food and alkalis.
4. It is associated usually with an adequate free hydrochloric acid content of the stomach. The epigastric distress, which may vary from a feeling of fullness or slight burning to severe pain, appears in attacks, lasting from a few days to a few weeks at one time, and recurring several times a year. During the interval between attacks, the patient is often free from distress. The duration of the ulcer may be from a few months to many years.

## DIAGNOSIS

The diagnosis of peptic ulcer should involve a careful consideration of the distress symptoms that have caused the patient to seek relief and careful observation for the purpose of demonstrating the correctness of the clinical facts obtained by the history and physical examination. Thorough search should be made in every case for evidence of the complications and sequelae of ulcer.

Pyloric obstruction, whether due to pylorospasm with acute inflammatory swelling, or dependent on induration and callus formation, is the most common complication of peptic ulcer. Other sequelae of ulcer are hemorrhage, perforation, hourglass stomach, and malignancy. The roentgen ray examinations give the most accurate evidence of the location of ulcer, as well as the presence of its complications.

## TREATMENT

Before instituting treatment in a given case of gastric or duodenal ulcer, a careful study should be made of the conditions that attend the ulcer. Whether the patient should be treated medically

or surgically depends upon a careful consideration of the clinical facts, and evidence of the complications of ulcer.

## REPORT OF CASES

*Pylorospasm with Peptic Ulcer.*—The first case is presented to show evidence of pylorospasm. Very frequent causes of this condition, especially in young people are chronic colitis, chronic appendicitis and tubo-ovarian disease. The basic phenomenon underlying the symptomatology of peptic ulcer is pylorospasm.

CASE 1. T. R., a girl twenty years of age, complained of epigastric distress, constipation alternating with diarrhea, attacks of soreness in the region of the appendix and dysmenorrhea. The duration of symptoms was about two years. The important points of the examination were a hyperchlorhydria, occult blood in the feces, tenderness in the epigastrium over the appendix region and the lower right quadrant.

Clinically, peptic ulcer, colitis, and tubo-ovarian disease were evident. Roentgenologic study confirmed evidence of ulcer in the first portion of the duodenum, a considerable retention of gastric residue at the six-hour observation, and a segmented appendix.

Laparotomy was advised and the patient submitted to operation. Appendectomy, right salpingectomy and a cyst removal from the right ovary were done. Adhesions from a periduodenitis with some induration of the first portion of the duodenum were found. After the operation the patient was placed on ulcer management for nonobstructive peptic ulcer, consisting of three ounces of equal parts of milk and cream given each hour from 7 a. m. until 7 p. m. About fifteen to twenty ounces of bland foods were given morning, noon, and night.

*Comment.*—The control of the free hydrochloric acid is to be maintained from the beginning by means of insoluble alkalis such as calcium carbonate, tribasic calcium phosphate, and calcined magnesia; for excess of these beyond the needs of acid neutralization do not lead to development of free alkali. When such alkalis are employed without soda bicarbonate, alkalemia is decidedly less severe and the clinical symptoms of alkalosis are unlikely to appear, especially if the complication of obstruction or vomiting does not occur.

For the convenience of the patient, the powders are marked numbers one and two. Powder number one consists of calcium carbonate grains ten, and tribasic calcium phosphate grains twenty, given each hour from 7:30 a. m. to 7:30 p. m. Powder number two consists of calcined magnesia and tribasic calcium phosphate each grains ten, as needed or directed in number and as indicated by the consistency of the stool.

Thirty to forty minims of tincture of belladonna are given daily. Special attention and instruction are given to the patient in regard to the treatment of an associated constipation or diarrhea, and to prevent a bowel distress from too much magnesia.

If possible, the patient should remain at rest in bed for three weeks during the initial part of his ulcer management, and a careful study made

for focal infection. Oral sepsis is a very common condition.

Subsequent study of Case 1 by means of the roentgen rays revealed the stomach to function normally and no gastric residue at the six-hour observation. Patient is well and at work.

*Management* suitable for the obstructive type of ulcer differs from that of the nonobstructive ulcer in the following points:

1. In many cases a larger quantity of powder is required to control the free hydrochloric acid of the day secretion, and powders are given until midnight.

2. The best results are obtained by emptying the stomach at night with the stomach tube one-half hour after the last powder is taken. The greatest stimulus to an excessive night secretion is thereby removed.

Otherwise the management is the same as that used for the treatment of the nonobstructive type of ulcer.

CASES 2 and 3. *Duodenal Ulcer with Partial Pyloric Obstruction*.—G. D. and E. P., two women, one aged forty-six and the other aged thirty-five years respectively, had duodenal ulcers with considerable six-hour retention of gastric residue. Each gave a history of long standing epigastric distress, constipation, and evidence of foci of infection elsewhere in the body. The younger patient had an associated condition of hyperthyroidism, and a fibroid uterus, which was removed previous to the time the patient came for examination. No doubt there was considerable organic change and stenosis of the pylorus in each of these two patients.

They were treated at home, their stomachs aspirated at night. Subsequent study disclosed the deformity caused by duodenal ulcer to be present, but absence of tenderness over the cap, freedom from symptoms, and no retention of gastric residue at the six-hour study.

The prognosis is good in this type of ulcer if the patient will stay accurately on the management for months with frequent observation and supervision. This is the most common type of ulcer in patients between twenty and fifty years of age.

1 1 1

CASE 4. *Duodenal Ulcer with Nearly Complete Pyloric Obstruction*.—P. P., a man sixty-eight years old, had a peptic ulcer for many years with much callus formation and stenosis of the pylorus. The walls of the stomach were dilated, and there was evidence of hyperperistalsis with much gastric residue at six hours. It was possible to see evidence of peristaltic waves through the abdominal wall passing from left to right, and a small tumor in the region of the pylorus could be felt. Due to the fact that he was a poor surgical risk when first seen, the medical treatment of a peptic ulcer that is causing obstruction was given, namely; increase in the amount of each powder, removal of the gastric contents with the stomach tube after the last powder at night, and the routine ulcer management described above. The patient continued medical management for about three months, and because he continued to have nearly complete obstruction, laparotomy was advised, the patient consenting to the operation. Through a midline incision the stomach was noted to be very dilated, and there were adhesions binding the first portion of the duodenum to the pars pylorica. Palpation revealed a dense and

thickened pylorus with narrowed lumen, evidence of healed duodenal ulcer with scar formation. A posterior gastro-enterostomy was done and ulcer management for nonobstructive type of ulcer was given. The patient made an uneventful recovery, which was partly due to his preoperative preparation, and at present is comfortable and gaining in weight.

1 1 1

CASE 5. *Duodenal Ulcer with Complete Pyloric Obstruction*.—W. H., a man fifty-six years old, had a peptic ulcer for many years.

His symptoms were those similar to the patient of sixty-eight years (Case 4). Because he had a hyperchlorhydria, loss of weight, epigastric distress two to three hours after meals, and after midnight, occult blood in the stools, complete obstruction with much retention of gastric residue, laparotomy was advised. A pylorotomy was done. Subsequent to the operation medical treatment for nonobstructive type of peptic ulcer was given. The patient at present is comfortable, has gained in weight, and is at work.

*Gastric Ulcer Complicated with Hemorrhage and Obstruction*.—Gastric ulcer occurs in a ratio of about one to twelve, as compared to the frequency of duodenal ulcer. The treatment of gastric ulcer usually is that of medical management, especially if the ulcer is a recent one, less than one centimeter in diameter, and associated with a hyperchlorhydria. The treatment may be surgical, as one must be ever mindful of the danger of gastric ulcer undergoing malignant change. If it is a large, old, indurated, calloused ulcer, it is very unlikely that a cure will be effected by medical treatment.

CASE 6. C. P., a man fifty-four years old, gave a history of the classical symptoms of ulcer, just given, of many years duration. This patient had a severe hemorrhage nine years previous. Following this a laparotomy was done and the ulcer was removed from the lesser curvature of the stomach by cauterization. Later another ulcer developed near the pylorus with a return of nausea, gnawing epigastric distress, vomiting, hyperchlorhydria, gastric retention, and occult blood in the stools. Gastro-enterostomy was advised, but just previous to this procedure, before any type of treatment was given, the patient had another severe gastric hemorrhage. He was immediately placed on the medical management for treatment of acute hemorrhage from peptic ulcer, which consisted of the following:

1. Absolute rest in bed.
2. Adequate nursing attention.
3. Morphin sulphate to control restlessness.
4. Hourly doses of alternate powders of calcined magnesia and calcium carbonate in sufficient amounts to control the free hydrochloric acidity from the beginning. These preparations do not produce gas and the magnesia prevents stasis in the colon, of feces, blood, and the precipitated chalk.
5. Blood transfusion, to promote clotting at the site of the hemorrhage and to sustain the patient, may be given.
6. Later, ulcer management was given.

*Comment*.—In the great majority of patients with ulcer complicated by hemorrhage, the application of medical treatment for acute hemorrhage controls the bleeding, clotting is promoted, the hemorrhage ceases and occult blood rapidly disappears from the stool and does not recur while the patient is on accurate ulcer management.



A gastro-enterostomy was done on this patient, based on the following indications:

(a) A history of two severe attacks of hemorrhage.

(b) Nearly complete obstruction from pyloric stenosis and induration.

(c) No relief from an excessive continued secretion.

After the operation the patient was placed on the treatment of the nonobstructive type of ulcer management to promote the healing of the present ulcer and prevent, if possible, the recurrence of another ulcer. The patient was advised to have evident foci of infection removed. Subsequent roentgen-ray study showed that the new opening in the stomach was functioning normally with no retention at the six-hour study. The patient is now free of symptoms, has gained in weight, and is at work.

**CASE 7. Gastric Ulcer Complicated with Malignant Change and Hemorrhage.**—D. B., a woman thirty-two years old had epigastric distress for several years. Recently there had been a severe hemorrhage from the stomach. The application of the treatment for acute hemorrhage from peptic ulcer was given, and the bleeding stopped. The patient was subsequently examined and an ulcer was found in the lesser curvature of the stomach. There was no free hydrochloric acid in the stomach contents, a negative Wassermann, occult blood was present in the feces, and persistent pain while on accurate ulcer management. Operation was advised, a gastrotomy was done, and a tumor with two ulcers in the mucosa was removed from the posterior wall of the stomach.

Microscopic examination disclosed a sarco-leiomyoma of the round-celled and infiltrating type.

**Comment.**—According to the statistics of the Mayo Clinic, only one in two hundred gastric tumors is benign, and one in five hundred and fifty is a myoma. Persistent hemorrhage or occult blood in the stools, while the patient is accurately on ulcer management, is suspicious of malignancy.

**CASE 8. Gastro-Enterostomy.**—J. M., a man forty-nine years old, had a gastro-enterostomy in 1927 for relief of symptoms of many years duration. The patient was free from distress for only a short time. Then he began to have a recurrence of nausea, heartburn, belching, diarrhea, occult blood in the stool, and loss of weight. He was very irritable and nervous. Many ulcerated teeth had been removed.

Roentgenologic study disclosed a jejunal ulcer at the stoma which was painful under pressure. The distal portion of the stomach and duodenum appeared to be normal in outline and function. He was placed on medical treatment for nonobstructive type of ulcer, and was quite free of his symptoms most of the time.

However, there were periods of belching, sour stomach, and soreness in the region of the stoma. Two to five per cent of patients who have had gastro-enterostomy have a complication of a gastrojejunal or jejunal ulcer. If medical treatment does not affect a cure, the procedure of choice is to take down the gastro-enterostomy and close the stoma, providing, of course, that the pylorus is patent, and there is no evidence of chronic ulcer or obstruction at the outlet of the stomach. Due to mental disturbances, the patient here reported committed suicide three months after

he was placed on ulcer management, and necropsy revealed the jejunal ulcer in a subacute condition and in the process of healing.

**Peptic Ulcer Complicated with Diverticula of the Duodenum.**—The association of ulcer with diverticula of the duodenum is emphasized in many case reports. These may be congenital or acquired, they may be clinically silent, or may be the site of major pathology. Diverticula of the duodenum are found chiefly in the latter half of life, are acquired, and are often produced by the contracting scar of ulcer.

**CASE 9.** E. A., a woman aged seventy-two, complained of periods of heartburn, sour stomach, vomiting, and constipation during the previous twelve years. These attacks appeared regularly two to three hours after meals and were completely relieved by vomiting. There was frequently epigastric distress after midnight which was relieved by soda and vomiting of sour material.

The important points of the examination were a hyperchlorhydria tenderness and soreness in the epigastrium, constipation, and a paroxysmal auricular fibrillation.

Roentgenologic study showed a niche of the lesser curvature of the stomach, which was near the pylorus. The six-hour observation revealed a diverticulum of the second portion of the duodenum and one of the third portion. The former was tender under pressure.

The patient was placed on ulcer management for several months. Subsequent study and observation revealed the patient to be free of symptoms with absence of pain and vomiting, and enjoying good health. The heart condition was successfully treated with quinidin sulphate.

#### CONCLUSIONS

1. The symptoms of ulcer are completely controlled and relieved in uncomplicated ulcer.
2. Alkalosis is not likely to occur with the use of the insoluble alkalis.
3. Pyloric obstruction is influenced in the manner previously described.
4. Hemorrhage ceases and occult blood rapidly disappears from the stool and does not recur while on accurate management.
5. Gastro-enterostomy is the procedure of choice to relieve complete pyloric obstruction.
6. Medical management should follow surgical treatment for peptic ulcer.

1052 West Sixth Street.

#### DISCUSSION

**FREDERICK A. SPEIK, M. D.** (800 Auditorium Building, Los Angeles).—Although gastro-duodenal ulcers heal under proper medical treatment, we must be constantly on the alert for associated pathology. Intelligent observation, with frequent x-ray examinations, finds that the biggest and deepest ulcers gradually get smaller until they disappear, and the patient is symptom free. However, many cases in which lesions of the portal lymphatic system exist may have a return of symptoms or a recurrence of ulcer, because these lesions are foci of infection in the gall bladder or appendix.

Sippy stated that in order to treat peptic ulcer intelligently it is necessary to determine the age, the type, the location and complication of ulcer. It is

necessary to go further and determine if there are any lesions of the portal system, such as cholecystitis, appendicitis, pancreatitis, hepatitis, or peritoneal adhesions.

The taking out of an acute or chronic appendix does not cure the ulcer. Many appendectomies are done before an ulcer was discovered. This is one reason why patients do not always get well following an appendectomy. There is pathology elsewhere.

Patients with foci of infection in the portal lymphatic system should have them removed at earliest recognition. If physicians are on the alert for associated ulcer pathology, the diagnosis will be made more promptly and better end results will be had.



HENRY SNURE, M. D. (1501 South Figueroa Street, Los Angeles).—The use of the roentgen ray in the management of peptic ulcer has been well covered in this presentation for each type of ulceration.

Another important condition, dealing perhaps more with the diagnosis of peptic ulcer than the management of same, has not been mentioned, namely, duodenitis. It should be considered before Case 1, as some investigators, Konjetzny, for instance, believe that it is the forerunner of peptic ulcer. On the other hand, Judd believes it to be a separate pathologic entity. The symptomatology of duodenitis is practically the same as that outlined for peptic ulcer in Doctor Lanphere's report; however, if the duodenum is opened and the mucous membrane inspected, no distinct ulcer is visualized. The mucous membrane presents a fine stippling, congestion and edema, usually over a small area; bleeding occurs easily on handling. The serosa is seldom thickened; occasionally small scar formation has been noted. Roentgenologically, the duodenal cap is small, difficult to fill and properly outline, and "writhing" is present. Also there is no constant niche present and no retention of barium meal in the stomach.

I would like to emphasize the point made by Doctor Speik, of the need of frequent examination to check up on the efficacy of the treatment and to aid in the search for associated pathology, particularly when the patient does not respond in the usual manner to ulcer management as outlined in the author's paper.



PAUL B. ROEN, M. D. (1680 North Vine Street, Hollywood).—Inasmuch as the exact cause of peptic ulcer is as yet undetermined, the management of the treatment must be directed toward relief of the symptoms, and of other pathology, if found present, as has been indicated by Doctor Lanphere in his paper.

Peptic ulcers are very frequently associated with other pathology, particularly of the nasal sinuses, the teeth, the gums, and the tonsils, as well as the gastro-intestinal tract. The symptom complex may be due to irritative lesions of the gastro-intestinal tract producing deformity of the duodenal cap, or may be entirely functional. Either one or any combination of these factors may be present in the same patient, rendering a positive diagnosis almost impossible.

Regardless of the exact pathology, a percentage of patients with this hyperacid syndrome so characteristic of ulcer will recover on mental and physical rest treatment, combined with a bland diet and proper alkaline medication at frequent intervals.

The results of treatment frequently prove or disprove the diagnosis. If the treatment does not produce the desired relief, or should there be a recurrence of the symptoms, a further and more intensive study is indicated, to be followed in turn by appropriate treatment.

## INJURIES OF THE UROGENITAL TRACT\*

### REPORT OF CASES

By BURNETT W. WRIGHT, M. D.

Los Angeles

DISCUSSION by Philip Stephens, M. D., Los Angeles; E. H. Crabtree, M. D., San Diego; Charles P. Mathé, M. D., San Francisco.

THE task of the urologist engaged in examining industrial accident cases is not always an easy one. He is rarely privileged to see these patients immediately after injury, when external, visible evidence of trauma is so often present, or when the immediate signs and symptoms of injury are in evidence to aid him in making a diagnosis. Aside from the exceptional, severely injured patient who requires immediate hospitalization, most of his industrial patients are seen in his office, days and often weeks after an alleged injury, with urinary complaints which only the patient himself, in most instances, attributes to his accident. He has nearly always received some treatment at the hands of others.

### PROBLEMS CONFRONTING THE UROLOGIST

When, still complaining, he comes to the urologist, he brings two distinct problems: (1) Is pathology present in the urogenital tract or not? and (2) If present, did it exist prior to the injury or develop as the result of injury or occur subsequent to and entirely independent of the injury.

The patient's story cannot always be relied on. Some willfully and skillfully misrepresent the facts; others are entirely honest in the belief that the symptoms date from the injury, when it may later be proved that there was preëxisting pathology and that the condition was either aggravated by the injury or that the patient's attention, for the first time, was called to symptoms which he previously ignored.

The reports of the surgeons who first examined him or later treated him are of necessity often incomplete from a urological standpoint, because these men do not generally employ the diagnostic procedures used by the urologist, or possess the special equipment necessary for these examinations. To see blood being ejected from the orifice of a ureter, following injury, for example, is infinitely more valuable than to read or to be told that there was blood in the voided urine shortly after the accident. The task of fixing the degree to which trauma is a factor in this class of cases rests largely with the urologist therefore, for usually his information is based on the only urological examination made in a given case.

In suspected cases of injury to the upper urinary tract, seen remotely after the accident, usually nothing short of a complete urological study will suffice. This includes a plain x-ray of the kidneys, ureters and bladder, examination of voided urine, test for residual urine, cystoscopy,

\* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the Fifty-Eighth Annual Session, Coronado, May 6-9, 1929.



bilateral ureteral catheterization, collection of urine from each kidney with examination, perhaps culture or guinea-pig inoculation of the separate urines, a differential functional test and, at times, a pyelogram or pyelo-ureterogram. The value of these procedures is illustrated by the following case.

#### REPORT OF CASES

**CASE 1.**—Walter W., age thirty-one; occupation, moving-picture actor. Was referred on August 2, 1928, complaining of pain in the upper right quadrant. He stated that on June 5, 1928, while engaged in his occupation of making pictures, he was required to fall from a running horse and "play dead." After several such falls (for which he was paid at the rate of \$10 per fall) he felt a sudden sharp pain in the right lumbar region which persisted and caused him to be confined to bed until July 4, 1928. Since that date he had felt a constant soreness and tenderness on pressure over the right kidney. Since his injury he had had no urinary disturbance except an occasional nocturia of one to two times. Prior to his injury he had always been well. He had never passed blood in the urine.

**Examination.**—Examination revealed a palpable, movable, and tender right kidney, larger than normal. Voided urine was negative except for a few shreds in the first glass. The external genitalia were normal. No urethral discharge. X-ray showed no shadows. Kidney outlines were not clearly seen. There were multiple strictures in the anterior urethra, the smallest of which admitted a No. 14 French searcher. After dilating the strictures, a cystoscopic examination showed a moderately inflamed right ureteral orifice, but no other bladder pathology. No urine could be seen coming from the right orifice and no peristaltic waves were visible on that side. A catheter met a distinct obstruction in the right ureter, eighteen centimeters from the bladder, which could not be passed with the smallest filiform. A No. 6 catheter passed easily to the left kidney pelvis, without obstruction. No urine was excreted from the right side in twenty minutes. Urine dripped freely from the left side. Phenolphthalein injected intravenously appeared from the left side in four minutes, with 35 per cent excreted in thirty minutes. No dye appeared from the right side. The right ureter was injected with sodium iodid and x-ray made. There was a complete blockage of the ureter in the upper third, near the ureteropelvic juncture, with none of the fluid entering the pelvis of the kidney. The upper third of the ureter, below the obstruction, was distinctly narrowed.

**Conclusions.**—The conclusions were: a walled-off hydronephrosis, with neoplasm of the kidney to be considered. Nephrectomy was advised.

**Subsequent Course.**—The patient chose an osteopath to remove his kidney, and the operator reported to the State Compensation Insurance Fund on December 15, 1928 that he had removed a hydronephrotic kidney containing 720 cubic centimeters of purulent urine, with the outlet into the ureter completely blocked. His conclusions were that the condition was the result of the ureter having been torn, with the subsequent scar formation occluding the lumen and producing the hydronephrosis. The specimen was secured by the State Compensation Fund and examined by the Brem, Zeiler & Hammack Laboratory which reported a tumor involving the upper third of the ureter, which on section was a myoma, originating in the musculature of the ureter, obstructing its lumen. Liability was refused.

The urologist engaged in this class of work soon learns not to attach too much importance to a patient's description of his injury or the symptoms he enumerates. An example of how easy it is to be misled occurred with the following case.

**CASE 2.**—C. F., age fifty-one. Was referred on December 18, 1928. He stated that on November 5, while in a tree at work, he fell astride a limb, bruising the perineum. He felt considerable pain, was nauseated, but did not vomit. The first urine voided seven hours later contained blood. He noticed blood for several days, and on the fourth day the left testicle became swollen and exceedingly sore. On December 11, a competent surgeon reported him as having a ruptured urethra with urinary extravasation into the scrotal sac, with formation of an abscess, which he had drained. We found the left half of the scrotum was indurated and enlarged, with a small fistula in the lower portion. The urine was infected, and he voided with some difficulty. The prostate felt slightly enlarged.

We concluded that an incomplete rupture of the urethra had occurred, with extravasation, and considered it unwise to introduce an instrument into the bladder and recommended him for compensation. Soon after, a second urologist cystoscoped him, found a calculus impacted in the posterior urethra which had ruptured the canal by pressure necrosis and that extravasation had occurred. The prostate was adenomatous. Compensation was justly refused.

The commonest type of case seen by the urologist remotely after injury is the epididymitis for which a direct blow or a "strain" is given as the cause. In our opinion, trauma alone does not cause epididymitis. A careful examination of the secretions of the prostate and seminal vesicles will nearly always reveal a focus of infection which supplied the organism to tissue devitalized by trauma. Acute gonorrhea must be excluded.

We believe that the interests of the insurance carrier, the employer, and those of the injured employee who has symptoms referable to the urogenital tract, will be better guarded and the problems of the consulting urologist greatly simplified if the interval between the injury and the examination is reduced to a minimum.

1137 Roosevelt Building.

#### DISCUSSION

PHILIP STEPHENS, M. D. (1136 West Sixth Street, Los Angeles).—We have been very much interested in Doctor Wright's paper and the various points which he has developed therein. We note his insistence upon thorough routine examinations and his attempt to impress us with the fact that if certain features are omitted, or short cuts are attempted, that we will, in all probability, miss certain features which we will afterward regret; or which might tend toward the loss of certain points which would be useful in preventing us from making diagnostic mistakes so important in establishing the causal relationship of certain symptoms of the alleged disability.

One special point which we would like to have impressed upon general practitioners, employers, insurance companies, and others interested in this work, is the impossibility of so-called epididymitis, or conditions of this character, being caused by what is termed ordinary strain incident to strenuous work—that they are infectious in character and that the infection necessarily need not be the result of venereal disease. We who are more or less active in industrial practice see many such conditions which are, as a



rule, attributed to a lift or strain, and we feel that a better understanding or standard procedure of decision should be established among all concerned.

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E. H. CRABTREE, M. D. (706 Medico-Dental Building, San Diego).—I have taken a great deal of interest in Doctor Wright's paper, as I think it is very important to ascertain the cause of cases of epididymitis that present themselves to us in compensation work.

We all recognize the fact that an epididymitis cannot come from a strain unless there is infection of some sort present. But the thing that interests me most is the fact that in many cases we are given a history of a severe strain from lifting, which is followed by a swelling in the scrotum. The doctor must deal fairly with the company and with the patient, and it seems to me that in cases where there is no history of any venereal or other infection, it is hard to tell a man who is incapacitated because of a condition which has come on following a strain which occurred at his work, that it is not a compensation case. In other words, although he may have had some latent infection in his urogenital tract, it may not have been Neisserian in type, and whatever the infection was, the man was not cognizant of the fact.

I would appreciate a little more discussion on this point as to what the attitude of the Commission is in this type of case.

✽

CHARLES P. MATHÉ, M. D. (450 Sutter Street, San Francisco).—Doctor Wright has emphasized an important point in his paper in calling attention to the fact that the patient suffering from an alleged injury to the genito-urinary tract is often seen at such a late date that it is hard to determine the exact rôle that trauma has played in producing the pathological lesion in question. Although an injury will often call the patient's attention to an insidious pathological lesion that had already existed for some time, it often lowers the resistance of the injured organ or structure, making it susceptible to immediate or subsequent infection. Many urologists, notably Hagner, Brewer, Squier, and Rehn, in discussing pyelonephritis have emphasized the rôle of trauma in reducing the resistance of the kidney, making it more susceptible to even the mildest form of infection.

There is no question as to the etiologic rôle of trauma when there is a ruptured kidney presenting a large tear; lesser injuries, including contusions, slight tears, hemorrhagic exudation, etc., are often overlooked and are hard to determine by the methods of diagnosis now at our disposal.

The question of compensation in injuries of the genito-urinary tract is still confused. In order to arrive at a fair decision for the injured worker, employer, and insurance carrier, a careful study and correct interpretation of the pathological processes directly or subsequently resulting from injury should be made. Four types of cases present themselves: (1) Cases in which there is no question as to the trauma causing the signs and symptoms from which the patient suffers, e. g., ruptured kidney, ruptured urethra, ruptured bladder, etc. (2) Cases in which trauma causes no appreciable immediate bad effect but lowers the resistance of the organ or structure, making it more susceptible to subsequent infection, e. g., pyelonephritis, epididymitis, etc. This category would also include cases in which a slight tear in the urethra due to trauma caused no appreciable immediate harm but resulted in progressive, extensive, and damaging stricture formation. (3) Cases in which trauma will light up or cause a preëxisting pathological lesion to give immediate trouble. This group includes cases in which a stone was dislodged by a violent blow, the urethra containing a stone ruptured by sudden violence, the lighting up of a previous more or less nonactive tubercular process, etc. (4) Cases in which trauma has called attention to a preëxisting lesion in which it is reasonable to assume that trauma had played no part in the immediate symptoms. This

type is well exemplified by cases one and two reported by Doctor Wright.

Although immediate examination of the injured person by a competent urologist will establish the rôle of trauma in the production of the alleged pathological lesion, it renders no aid in ascertaining subsequent ill effects. The rôle of lowered resistance resulting from injury is the source of considerable debate and can only be determined by a thorough understanding of pathological processes of lesions of the organs and structures making up the genito-urinary tract.

✽

DOCTOR WRIGHT (Closing).—Concerning the question raised by Doctor Crabtree, and mentioned in Doctor Stephens discussion, the Industrial Accident Commission, replying to an inquiry from me, has written as follows:

"The Industrial Accident Commission has no fixed policy which it publishes to cover the question which you ask. The Commission feels, however, that inasmuch as some strain, accident, or misadventure, causes disability through lighting up or further injuring some defective part, there should be compensation, in part, at least.

"Infections of the prostate and seminal vesicles are very common, and may be present when there never has been any Neisserian infection. The workman is accepted as he is with his defects and weaknesses and tendencies to failure. Therefore, when in the presence of an infection and a strain precipitating a disabling condition, the Commission usually rules that the case is wholly or partially compensable."

## GLAUCOMA—SOME SURGICAL CONSIDERATIONS\*

By MAY TURNER RIACH, M. D.  
San Diego

DISCUSSION by Frederick C. Cordes, M. D., San Francisco; Lloyd Mills, M. D., Los Angeles.

DUKE-ELDER expresses the hope that some day we may overcome glaucoma and cataract by physicochemical means. Some encouraging work is being done along this line, but I believe that operative interference will continue to hold its strong position for a good many years; and it merits all the thought and discussion we can bring to bear from every standpoint.

I make no claim for originality for any point raised in this paper, but the seriousness and prevalence of glaucoma and our present inability to master it may excuse one from apology in repetition.

I served an internship at the New York Eye and Ear Infirmary in 1918 and 1919. Dr. John E. Weeks and the late Dr. Robert G. Reese were active surgeons at the infirmary during my residency. Doctor Weeks did the Lagrange operation and Doctor Reese did his iridectomy almost entirely for glaucoma. As house surgeon I assisted at most of these operations and followed the end results of the ward cases, taking fields, visions and tensions; comparing the value of the Lagrange, as done by Doctor Weeks, and the iridectomy, as done by Doctor Reese. I considered each surgeon a master who had perfected his technique, and felt that their results would give a true estimate of the effectiveness of the two operations.

\* Read before the Eye, Ear, Nose, and Throat Section of the California Medical Association at the fifty-eighth annual session, Coronado, May 6-9, 1929.



After close observation of these cases running side by side, I concluded that their percentage of successes was very high and about equal; and this conclusion is substantiated by the reports given below.

#### LAGRANGE OPERATION

In Doctor Weeks' report, given in *Archives of Ophthalmology*, May 1920, he states: "The Lagrange operation, which I have performed at least three hundred times, is relied on for the forms of glaucoma other than those reserved for the Elliot operation. The operation is performed as described by Lagrange except that the incision is seldom more than five millimeters long. The shorter incision is employed to avoid the danger of prolapse of the head of the ciliary body or of the lens into the wound, and to lessen the possibility of escape of vitreous. In this series of cases there has been deep intra-ocular hemorrhage twice. The opening has been occluded by the falling forward of the head of the ciliary body in four. There has been loss of vitreous in three cases. Hypertension has recurred to an extent to nullify the result in only four instances. There have been but two light cases of iritis and no case of late infection."

#### IRIDECTOMY OPERATION

Later I was office and clinical assistant to Doctor Reese and had the opportunity to follow up the end results of some of his private cases as well as the hospital ones.

Doctor Reese reported 237 iridectomies, which he performed on private patients for glaucoma; 172 noncongestive and 65 congestive. The report of his results and the technique of his iridectomy is described in detail in *Transactions of Section on Ophthalmology* of the American Medical Association, 1923. He states: "We have been successful in relieving the tension and restoring the vision that had not been destroyed by pressure atrophy in every case of congestive glaucoma in which we operated. In noncongestive cases the vision was kept *in statu quo* and the tension kept below thirty (Schiotz) in all but five of these which could be followed for any length of time, in these the tension remained about thirty-seven. In twenty-five noncongestive cases two iridectomies were performed, and in eleven three iridectomies had to be done before tension was relieved. There was not a single case of expulsive hemorrhage; this was accounted for by the fact that the aqueous was expelled drop by drop. In no case was the lens injured with the keratome, or was there loss of vitreous or the lens dislocated, nor did the head of the ciliary body prolapse or become adherent to the incision. Never was an anterior chamber found to be so shallow that it could not be entered with this model of keratome." (A special broad one bent at an angle of twenty-one degrees.)

It is to be remembered that Doctor Reese excised a piece of sclera from the anterior lip of the incision in all noncongestive cases.

When analyzed the Lagrange and the iridectomy as done by Doctor Reese in chronic cases

are practically identical operations in principle. In the former the knife moves from below upward, and in the latter from above downward. "The sclerectomy is the basic element of the operations," as stated by Doctor Weeks in a personal communication of recent date.

#### ELLIOT OPERATION

During my internship the Elliot operation was not generally practiced at the infirmary, and in the cases where it was performed the end results did not compare favorably with those of the two operations above discussed; but later in London, where the trephine was more frequently done than any other operation for glaucoma, I observed the technique and the end results of the trephine at the Westminster Ophthalmic and Moorfield hospitals, especially the work of Mr. Elmore C. Brewerton and Sir William T. Lister, and I learned that their results were as good as those of Doctors Weeks and Reese.

#### LISTER'S METHOD

I wish to quote five special points emphasized by Sir William T. Lister:

"1. In reflecting the conjunctival flap, take all the episcleral tissue with the conjunctiva that you can get, in order to make the flap as thick as possible.

"2. Make the corneal incision with a Tooke's corneal splitter.

"3. Raise the flap at right angles to the cornea and slide the trephine on as far as it will go in order that the aperture may be situated right up to the furthest extent of your incision.

"4. When trephining, place the trephine—in the first instance—symmetrically, but as soon as you feel it gripping and cutting, turn the hand over to your left in order that the disk may have a hinge and not be completely separated. Also I prefer to leave the stilette in the tube so that on removal of the trephine from the wound, you may tend to suck the disk out. (In order to prevent the disk getting into the anterior chamber. If it does I do not think it matters, but it is not so artistic.)

"5. In making the iridectomy, take hold of the iris as far *above* as possible and at its base, and then push downward in order to make an irido-dialysis before cutting the buttonhole iridectomy."

The above is quoted from a personal letter to me recently received.

#### PERSONAL OBSERVATIONS

During the last ten years I have had under my care 487 cases operated upon for glaucoma. These occurred in New York, London, Serbia, Constantinople, and in Egypt. The end results of the work I did myself in the East did not compare favorably with that done in New York and in London, as mentioned above, except perhaps in the acute cases. I worked under great difficulties. Postoperative care and observations were necessarily far from satisfactory. At first in Macedonia, where I started my work abroad, I could not speak the language, and I had no assist-



ant trained in eye work. The work was overwhelming in amount. Much of the equipment had to be improvised. Visions and fields were taken by interpreters I trained myself, but the tensions, upon which I relied mostly, were carefully and repeatedly taken by myself (using the Schiotz). Some of my cases were under observation for a very short time; so that some of those labeled successes may very well have proved to have been failures if they had been under observation for a longer period. The cases were mostly of the acute, well advanced or absolute glaucomas. The end results were observed over a period ranging from two to six months in Serbia, and from two weeks to two years in Constantinople and in Egypt.

I did the Reese iridectomy almost entirely at first. In the noncongestive cases I removed a piece from the anterior lip of the scleral incision in its entire thickness with either the scissors or the punch. In absolute glaucoma, where the fields were very narrow or where there was very much cupping, I employed the Elliot trephine. I learned to refrain from doing the trephine where any inflammatory condition existed, as the opening often subsequently closed in.

In Macedonia there was no trachoma complicating, but later in Constantinople and in Egypt, where the complications of trachoma and purulent ophthalmia had to be reckoned with, I found the Lagrange and trephine easier to do than the Reese iridectomy. As time went on I did the trephine more and more, especially where I felt that after treatment would be neglected.

I have often employed the scissors to advantage in some cases where the anterior chamber was practically obliterated, e. g., as in adherent leukoma, making a scleral flap with keratome so that the opening into the anterior chamber is two or three millimeters in length—just large enough to admit the point of the scissors. In this way the lens can be more easily avoided. This is also useful in secondary glaucoma with a deep anterior chamber, where it is imperative to avoid a sudden gush of aqueous. This is done in a somewhat similar way as described by Luedde in his "winged" iridectomy incision.

In making each linear incision for glaucoma, I visualize the angle and direct the instrument that the anterior chamber may be opened into about 1.75 millimeter posterior to the limbus, in the medium-sized eye, so that the canal of Schlemm may be entered in its posterior part, the pectinate ligament severed, and any adhesions of the iris separated from the cornea. The posterior scleral incision allows the iris to be detached at its junction with the ciliary body. In doing the iridectomy I tried to effect a dialysis by pulling the iris under tension to the opposite side as I made the cuts, as described by Doctor Reese. Gradually, with experience in these operations, my technique improved and my results also improved *pari passu*.

I wish to emphasize the importance of massage following the filtering scar operations. The tension may be regulated more or less by it. I begin

this gently on the third day after operation and continue it daily, as the case requires. The patient may be taught to do this at home. I believe that success in a large number of cases rests on the exercise of this point.

I have endeavored to compare the operations performed for glaucoma of similar type, viz., the noncongestive. After careful survey of the end results from my notes of such cases, I found that 83 Reese iridectomies with sclerectomy, 95 Lagranges (with the short incision as done by Doctor Weeks), and 118 Elliot trephines gave in my hands practically the same percentage of successes for each of the three operations, viz., from 65 to 70 per cent.

My belief is that the secret of success lies in the finesse of technique more than in the choice of operation.

#### SUMMARY

To sum up on broad lines, the operating surgeon in glaucoma must be prepared to perform two operations: In acute cases, a deep, broad iridectomy, after the type advised by Doctor Reese; and in the chronic ones some form of filtering cicatrix operation, and here I would advise the Elliot trephine. It is, in my opinion, easier to perform and carries less risk than any of the other filtering scar operations and the results are just as good.

If the surgeon concentrates on the technique required for these two operations, he is well equipped to deal with most cases of glaucoma which require operation.

1007 Medico-Dental Building.

#### DISCUSSION

FREDERICK C. CORDES, M.D. (384 Post Street, San Francisco).—Doctor Riach's paper gives a clear, concise résumé of the subject. As the author points out, the surgical consideration of glaucoma must be regarded under two separate headings: the acute and chronic forms of the disease.

In acute glaucoma, iridectomy has long been a satisfactory and well recognized procedure. The results in this operation are uniform the world over.

In chronic simple glaucoma various operations are done to produce a filtering cicatrix. It was very interesting to note that under the author's observation the Elliot trephine did not compare favorably with the Reese and Lagrange in this country, while in England the results with the Elliot were excellent. I agree with Doctor Riach that this is probably a question of technique. We have all had the experience of rather disappointing results in some new operative procedure until some apparently minute detail in technique was called to our attention.

One operation not mentioned by the author is iridotaxis. This, as done by Wilder, or the modification used by Gifford, gives results that compare favorably with the other operations. The simplicity and ease of performance are important factors in its favor. The iris is not wounded and for this reason there is less liability of hemorrhage. This is important in hemorrhagic glaucoma or in cases of high blood pressure. It should not be used, however, in an eye that has a developing cataract, for the misplaced pupil and iris would complicate the incision.

In glaucoma, following cataract extraction, I have found cyclodialysis very valuable and feel it is the best operation for this condition.

The selection of an operation producing a filtering cicatrix is largely a personal matter. The surgeon



should choose that one to which he is best adapted and which in his hands gives the maximum consistency.

✽

LLOYD MILLS, M. D. (609 South Grand Avenue, Los Angeles).—The fundamental surgical considerations of glaucoma seldom have been presented more clearly or practically than in this able paper. Doctor Riach's conclusions will meet with the approval of most eye surgeons. Three points are evident in the surgical treatment of glaucoma:

1. All glaucoma should be considered as surgical unless there is prompt therapeutic proof to the contrary, as in simple hypertension without involvement of the optic nerve.

2. The measure of importance in all the filtering-scar operations, whether Lagrange, Reese, or Elliot, is the sclerectomy and the correct formation of its covering flap of conjunctiva.

3. The art of the surgery of chronic glaucoma lies in the adaptation of the form and size of the sclerectomy to the surgical needs of the given case. The presence or absence of inflammatory and exudative changes in the anterior segment and of progressive degenerative changes in the optic nerve, regardless of the degree of hypertension, should determine the form of the operative measure.

I have seen so many of these glaucomatous eyes which have gone blind after inadequate measures that I have long ago given up the Elliot operation in severe cases, believing that the Lagrange, or the Reese operation with sclerectomy, offered the patient the best chance of the maintenance of sight and the mastery of individual hypertension. I cannot believe, out of my own experience, that the Elliot operation permits, as a rule, the breadth of opening of the filtration angle or the breadth and depth of the iridectomy which is necessary to be fully effective. If there is one place in ocular surgery where radicalism must enter it is in the cases of typical amaurotic excavations in glaucomatous degeneration. Accordingly, in the simple cases, my sclerectomy is made about as small as can be done easily with the Graefe blade, but in the cases showing progressive degeneration I use the full width sclerectomy as advised by Lagrange and believe that my results have justified the really minor risks.

It is well recognized that the relief of hypertension is the relief of only one part of the syndrome of glaucoma. The prevention or halting of the other important element, optic atrophy, very often follows the successful relief of hypertension. The cases yet to be mastered are those where the atrophy is progressive, regardless of the degree of reduction of ocular tension. The mastery of such cases probably will come through earlier diagnosis and earlier and more radical operation.

## INDICATIONS FOR SURGERY IN PULMONARY TUBERCULOSIS\*

By H. E. SCHIFFBAUER, M. D.  
Los Angeles

DISCUSSION by Harold Brunn, M. D., San Francisco;  
William B. Faulkner, M. D., San Francisco; E. W. Hayes,  
M. D., Monrovia.

THE purpose of this paper is to discuss the selection of patients suffering from pulmonary tuberculosis who are suitable for surgery.

The term "surgery" is applied to the various methods of extrapleural thoracoplasty, operation on the phrenic nerve, external and internal pneumolysis. The application of these methods will not be considered.

Surgery in pulmonary tuberculosis is based on a sound physiological principle and an accurate knowledge of its pathology. The object of all surgical interventions is to obtain a relaxation of the lung, with the ensuing atelectasis which places the diseased lung at rest, obliterates cavities and decreases the toxemia, increases fibrosis and so secures scarring and retraction.

It must be impressed upon the patient that the operation does not eradicate the diseased lung but only assists the patient in increasing his resistance and in preventing reinoculation and hemorrhage.

If surgery is confined to the ideal cases, operation will be refused to many who would be benefited by it. Results from operation on improperly selected cases will be unfavorable and a discredit to surgery.

### POINTS FOR CONSIDERATION IN SELECTION OF CASES

*Resistance.*—The selection of patients suitable for surgery is of the utmost importance. It requires a careful consideration of all the phases of pulmonary tuberculosis, especially the immunological reactions, and the closest collaboration with a tuberculosis specialist.

The accurate estimation of the patient's resistance to surgery as manifested by the various clinical symptoms, with a clear understanding of the immunological processes, will greatly assist in the selection of the appropriate time for operation.

*Interpretation of Roentgenograms.*—The correct interpretation of a series of roentgenograms, taken over a period of months is of extreme importance. A decision should not be based upon a few plates. It is advisable for the surgeon to make an exacting study of the roentgenograms with a competent roentgenologist. Such study, made over a period of years, will aid him in the selection of cases, the type and extent of surgery to be performed.

*Physical Findings.*—The physical findings and clinical observations are perhaps of more importance than the roentgenological studies. The surgeon should be adept in the use of the stethoscope. It will often prevent him from operating on unsuitable cases.

The pathological condition of the diseased lung is an important factor. For our consideration it is sufficient to classify pulmonary tuberculosis into two groups: the exudative and the proliferative fibrotic types. The primary tuberculous lesion of the lung is always exudative. When the initial lesion is slight, with good resistance, it readily changes into the proliferative type with a tendency to fibrosis. The less resistance produced by the patient the more extensive the exudative lesion. After the initial lesion, dependent upon the extent of infection and the patient's resistance, there always exists the mixed form. It is important to know whether the exudative or the proliferative type predominates, and to what extent. Experience has proved that surgery in the preponderant exudative lesion gives the poorest result, whereas in the slow progressive proliferat-

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ing type the best results have been obtained. Operation in the stage of defense is inadvisable. It is only after this stage has been passed and the patient is not making satisfactory progress that surgery should be taken into consideration. Further procrastination is inconsistent with the experience of the present results from surgery.

#### INDICATIONS FOR SURGERY

1. Unilateral chronic fibrotic ulcerative tuberculosis with or without cavities, in which conservative methods have failed, with a contralateral lung which has no activity in the apex, nor the presence of a hilar, or lower lobe lesion is a condition favorable for surgical intervention.

2. Some cases, with a basal exudative lesion, which are progressive, with extensive pleural adhesions, with a normal contralateral lung, in young patients, with good resistance may be considered. Extreme care should be exercised in the selection of the exudative cases. The highest mortality and the poorest results follow surgical interference.

3. Hemoptysis is not an indication for urgent surgery. As a rule, strict rest with other conservative treatment is usually sufficient to arrest the bleeding.

Repeated hemorrhages in suitable cases are greatly benefited by surgery. Internal pneumolysis is effective when an incomplete pneumothorax, due to adhesions, prevents the compression of the diseased lung which is bleeding.

Phrenic interruption will often control repeated hemorrhage from cavities. Extrapleural thoracoplasty is an efficient method of permanently stopping bleeding in the chronic ulcerative diseased lung.

4. Tuberculous empyema with mixed infection, in which conservative methods have failed, calls for surgery. In this condition we cannot be too particular about the contralateral lung.

5. Incomplete pneumothorax is helpful for a unilateral involvement which is not making satisfactory progress.

6. Early surgery will prevent the development of empyema and save many patients with a pleural effusion, secondary to artificial pneumothorax with or without tubercle bacilli, which accumulates after repeated aspirations, and in which expansion does not take place after the withdrawal of the fluid. Ordinarily 15 per cent of these patients would develop empyema.

7. Spontaneous pneumothorax with bronchial communication is helped by the intervention of surgery.

Too much consideration of the existing pathological condition of the involved lung should not be given, but more attention to the patient's resistance to surgery. Individuals with bad family history of tuberculosis are poor operative risks. The emaciated and the obese patients do not tolerate surgery and, if possible, their condition should be improved.

The outward signs of fibrosis of the lung, manifested by the narrowed and insunken inter-

costal spaces; marked supra- and infraclavicular grooves; atrophy and slight rigidity of the muscles attached to the anterior and posterior chest walls; these, associated with the roentgenological findings of a deviation of the trachea to the affected side, fixation of the mediastinum, a rising of the diaphragm, and a drawing over of the base of the heart, are indications that every effort is being made by nature to put the diseased lung at rest, but that further aid is required.

#### CONTRALATERAL LUNG

Patients with unilateral tuberculosis are seldom seen by the surgeon. Surgical need is not a question of whether one lung is free from disease, but it is a question of the type, location, extent, probable duration, and whether there is any activity.

It is obvious that any diseased condition of the good lung requires adequate observation; if the condition is progressive, surgery is contraindicated; should the disease remain stationary, or be retrogressive, graded surgery may be considered.

It is not unusual to observe improvement in the contralateral lung after a phrenicectomy, and a continued improvement after a complete thoracoplasty has been performed.

It is in this class of patients that the test operation of phrenicectomy is of value. After the diaphragm is paralyzed and the patient has an elevation of temperature, increase in pulse rate, and moisture over the suspected area, further surgery is contraindicated at this time.

The existence of a chronic disease of the good lung, such as emphysema, chronic bronchitis, bronchial asthma, bronchiectasis, extensive adhesions between the base of the lung and diaphragm, is a contraindication for surgery.

#### CONTRAINDICATIONS TO SURGERY

*In Early and Late Cases.*—Early cases in the defense stage, and advanced bilateral cases, are an absolute contraindication.

*Lack of Defense Mechanism.*—Constitutional symptoms, manifested by a high temperature, rapid pulse rate, increased respiration, dyspnea, cyanosis, a low blood pressure, are all symptoms indicating exhaustion, with a complete breakdown of the defense mechanism. Surgery will hasten the end.

*Blood Picture.*—A gradual decrease of the erythrocytes, low hemoglobin, increase in the lymphocytes, with a continued absence of the eosinophils, and a decrease in the sedimentation time, are all factors indicating a failing resistance.

*Age.*—Operations should be limited to patients between the age of fifteen and forty-five. The best results are obtained between the age of twenty and thirty-five. Age is, however, not an important factor in the selection of cases. Patients at the age of twelve and fifty-seven have been operated.

*Choice in Left and Right-sided Operations.*—Operations on the left side give better results than



on the right. The left lung, consisting of two lobes, smaller in volume, assisted by the heart in aiding compression, are the important factors in determining the end-result. Cardiac embarrassment is more frequent when operation has been on the left side.

*Circulatory System Contraindications.*—A persistent pulse rate over one hundred, with a blood pressure under a hundred, is a relative contraindication to major surgery.

Myocardial degeneration is an absolute contraindication to thoracoplastic operations. Valvular lesions without myocardial damage are satisfactory risks. In all doubtful heart conditions an electrocardiogram is a valuable aid in estimating the patient's resistance to surgery. After a thoracoplastic operation an additional amount of work is placed on the heart, first, by the displacement of the heart; second, by an increased resistance in the lesser circulation; and third, by the autotuberculation of the patient, causing an increase in the heart rate.

*Kidney Impairment.*—Patients with kidney conditions which give an impaired functional test, with changes in the blood chemistry, should not be submitted to major surgery. A mild degree of toxic albuminuria is not a contraindication.

*Tuberculosis of the Intestines.*—A mild chronic tuberculous condition of the intestines which does not interfere with proper nutrition is not an absolute contraindication. A tuberculous ischiorectal abscess should not deter one from considering major surgery of the chest.

*Tuberculosis of Other Organs.*—Tuberculosis of the larynx, with a severe perichondritis is a relative contraindication; a mild laryngeal tuberculous involvement usually improves after a thoracoplasty.

Chronic tuberculosis of the bones, joints, or skin are not an absolute contraindication to surgery.

#### SUMMARY

This paper is a plea to that group of physicians who are well informed on the results that have been accomplished by surgery but have not had the courage to abandon their conservative treatment in chronic destructive processes of the lung which show no improvement. May they reconsider these cases, realizing that they can save many from an early death, cure at least one-third, improve another third, and prevent an enormous economic loss of time and money.

The selection of cases is of paramount importance, but the end-results will be in direct proportion to the surgeon's skill in his preoperative management, his operative technique, and the postoperative treatment.

520 West Seventh Street.

#### DISCUSSION

HAROLD BRUNN, M. D. (384 Post Street, San Francisco).—Doctor Schiffbauer has given us in a masterful way the indications and contraindications for the adoption of surgery in pulmonary tuberculosis. We will, therefore, not discuss the operative procedures

themselves, but confine ourselves to the subject as outlined by him in his paper.

I am glad to note the very evident conservatism which marks the work of Doctor Schiffbauer. The general surgeon taking up this type of work must more or less reconstruct himself and take a different attitude than has been his custom in his ordinary surgical work.

Patients suffering from tuberculosis that are brought to his attention for surgery require careful study, long observation, and consideration of preliminary procedures before the major operation is undertaken, and a close association with the specialist. This is not the place for quick judgments and dogmatic generalization. Each case must be decided upon its own merits.

As has been pointed out, certain groups of these patients do not respond to surgery; on the contrary a surgical procedure may, in one of several ways, tend to extend the disease. I think I can say that where we have undertaken surgery with grave doubt that, for the most part, we have had regrets.

We believe that thoracoplasty and phrenicotomy are two surgical procedures of great value in well-chosen cases, and will shorten the time of cure that cannot be obtained by other methods.

We quarrel at times with the tuberculosis specialist who, although a believer in collapse therapy (artificial pneumothorax), still persists in this when it is not bringing about a result, either because of adhesions or other factors, and refuses to accept thoracoplasty which so perfectly meets the requirements.

Theoretically they admit the value of the operation but practically they refuse to submit their patients to it. The line of cleavage lies in the fact that they believe these patients will with rest and time get well, as many have, and that thoracoplasty, while it may hasten recovery, might throw them over on the other side and they refuse to take the chance.

We who believe in thoracoplasty think that the tuberculosis specialist fails to give a certain proportion of his patients the advantage of this operation and waits too long until finally the indication for it has passed.

Education is necessary on both sides. We believe there is a common ground, but this can only be accomplished by intimate association and discussion.



WILLIAM B. FAULKNER, JR., M. D. (University of California Hospital, San Francisco).—The value of collapse therapy in pulmonary tuberculosis has already been definitely established. The successful outcome in many cases following artificial pneumothorax has been recognized by all familiar with this type of work. There is a group of cases, however, in which pleural adhesions so fix the lung to the diaphragm and chest wall as to interfere with an efficient collapse by artificial pneumothorax alone. It is in this group that section of the phrenic nerve or thoracoplastic procedures find their greatest use. As has been pointed out by Doctor Schiffbauer, the success to be obtained following these surgical measures is in direct proportion to the care employed in the selection of cases and the choice of operative procedure. This selection of cases calls for the greatest coöperation between the chest specialist, thoracic surgeon, and roentgenologist.

It is by such coöperative work that exceptional improvement often follows the use of surgery. There are a few scattered cases, however, in which surgical treatment is followed by a persistence of the symptoms, or an extension of the patient's disease. The unfavorable impression which these present leads to a hesitancy in recommending surgery for other patients in whom all the indications are present for an operative improvement.

If symptoms persist following operation they are as a rule due to an incomplete collapse of the diseased lung. The localization of the remaining disease within the lung can sometimes be made by the injec-



tion of bromifin into the tracheobronchial tree or by bronchoscopic examination. Further operative procedures aiming at collapse should then be carried out at the site at which bromifin has localized the disease. We have had one such patient who had an incomplete relief of symptoms following section of the phrenic nerve and posterior thoracoplasty. (The sputum had been reduced from two cups to one-half cup a day.) The remaining disease was localized in the anterior portion of the chest. An anterior thoracoplasty was then done, and the patient had an immediate and complete relief of all symptoms. This particular patient illustrates the need for further surgery rather than less surgery in certain instances that fail to improve with the usual operative procedures.

The extension of the disease following surgery has been attributed to the aspiration of pus from the compressed area of the diseased lung with resulting aspiration bronchopneumonia. This can be prevented if the patient is bronchoscoped immediately before the chest operation so as to remove pus from the diseased areas. This procedure can readily be done in a very few minutes under local anesthesia without pain and with little discomfort to the patient.

We believe that with the employment of the bronchoscope, the use of bromifin, and the adoption of further operative procedures, the favorable results following surgery should be even more marked. However, as Doctor Schiffbauer emphasizes, surgery does not give an immediate cure of the disease; the patient still has tuberculosis and should continue medical care and general tuberculosis regimen long after the operative convalescence



E. W. HAYES, M. D. (129 North Canyon Drive, Monrovia).—Surgery in pulmonary tuberculosis, as Doctor Schiffbauer has pointed out, is based on sound physiological principles. Artificial pneumothorax has demonstrated the effectiveness of collapse therapy in this disease and, as a consequence, it stands out today as the one great addition to our therapeutic armamentarium in this field during the past twenty-five years.

Collapse of the lung by surgical measures, while yet relatively new in its application, bids fair to take its place alongside induced pneumothorax as another real addition to the therapy of pulmonary tuberculosis. Chest surgery, however, is considered and applied, for the most part, only when pneumothorax cannot be effectively induced. It is a more serious undertaking than pneumothorax. Consequently it requires more careful study and selection of cases.

Doctor Schiffbauer has covered the points to be considered in this selection so thoroughly, and brought out his points so clearly that I can add but little to what he has said. As an internist dealing entirely with chest conditions, I do want to emphasize one or two of the points he has made.

We must bear in mind the importance of a careful study and an understanding of cases of pulmonary tuberculosis that are to be subjected to surgery lest, on the one hand, it will be denied to those who could be benefited by it, and, on the other, it will be applied to cases unsuited and will bring this means of therapy into disrepute. There should exist the closest collaboration between the tuberculosis specialist and the chest surgeon, or better still, as the doctor has said, the chest surgeon should familiarize himself with the physical signs and clinical course of pulmonary tuberculosis and the chest specialist should aim to familiarize himself with those factors which a patient must withstand when subjected to the additional and always severe strain incident to surgery of the chest. Under these circumstances the chest specialist will be in a position to intelligently select patients for surgical consideration; while the chest surgeon will then be able to render to his patient a more intelligent and more effective preoperative study and care, and post-operative management.

## INFECTION OF ABDOMINAL WALL WITH *B. WELCHII* FOLLOWING ENTEROSTOMY FOR BOWEL OBSTRUCTION\*

REPORT OF CASES

By EDMUND BUTLER, M. D.

AND

GEORGE RHODES, M. D.

*San Francisco*

**D**URING the last five years one hundred and eighty patients have been operated upon for bowel obstruction. Many of these patients came into the hospital late and frequently enterostomy was performed. We have always strongly advocated enterostomies in the first loop above the region of the obstruction in late cases. The improvement following enterostomy has been so obvious that we are inclined to make use of it in many patients who would recover without drainage. The opening of the bowel under the most perfect technique results in contamination of the peritoneum and the wound.

*B. welchii* or other pathogenic anaerobes are always present in the lower ileum. This finding is the observation of many careful investigators. Dudgeon cultivated *B. welchii* from the stools of 35 per cent of two hundred ward patients. Williams cultivated *B. welchii* from the vomitus of eleven out of nineteen cases of bowel obstruction, from nineteen out of twenty advanced cases, and no growth of *B. welchii* from the vomitus of three patients with pyloric obstruction. In a reprint of patients treated with gas gangrene antitoxin, Williams shows a reduction in mortality in appendicitis from 6.3 to 1.17 per cent, and in bowel obstruction from 24.8 to 9.3 per cent, crediting the use of gas gangrene antitoxin for this remarkable reduction.

Spinal anesthesia is particularly suitable for patients suffering from bowel obstruction. The use of spinal anesthesia, and the milking of bowel contents into the colon, from which the toxic material is rapidly evacuated, will greatly reduce the number of enterotomies and enterostomies. Many border-line cases will clear up without operation following the use of spinal anesthesia.

Organic intestinal obstruction is a surgical condition requiring an early diagnosis and early operation. Tissue fluids and chlorid lost by vomitus must be replaced by intravenous and subcutaneous salt solution. Tube drainage of the stomach is advisable; the tube should be left in place as long as nausea is present. Enterostomy may be replaced in certain cases by threading a long stomach tube of large diameter through anus, rectum, sigmoid, ascending colon, transverse colon, and descending colon. Through this tube fluid contents and gas may be evacuated.

The use of *B. welchii* antitoxin, as advocated by Williams, has a very definite place in the treatment of severe toxemia following bowel obstruction, and many investigators not so impressed

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with the glowing statistics of such optimists as Williams, nevertheless advocate its use. We believe that every case of bowel obstruction and peritonitis which shows toxemia should receive anti-gas gangrene serum.

The following two cases were treated in our wards at the San Francisco Hospital. The first was an infection of the operated wound with a pure culture of *B. welchii* following enterotomy; the second, a peritonitis and polymicrobial wound infection following enterostomy, the outstanding finding being the presence of anaërobic which produced excessive gas and gangrene in the anterior abdominal wall.

#### REPORT OF CASES

CASE 1.—December 4, 1929. V. C., No. 116934, female, age fifty-four.

*Condition on Examination.*—Bowel obstruction complete. Symptoms began seventy-two hours before entrance to the hospital.

*Operation.*—Adhesion that completely obstructed ileum four feet from ileocecal valve was released. Bowel was completely drained after the method described by Halden. Opening in bowel was closed, and laparotomy wound closed without drainage. Forty-eight hours later wound opened; the subcutaneous tissues were edematous and contained bubbles of gas. Marked evidence of general toxemia was present, but no gangrene. Entire rectus muscle was found liquefied into a chocolate-like solution. Hematogenous jaundice was marked.

*Treatment.*—One hundred cubic centimeters of anaërobic antitoxin in four hundred cubic centimeters of 10 per cent glucose was given intravenously. One hundred cubic centimeters anaërobic antitoxin was injected subcutaneously and intramuscularly around the involved area.

Improvement in general condition was almost immediate. Jaundice cleared rapidly. Twenty-four hours later, one hundred cubic centimeters of antitoxin was given intravenously. Patient recovered slowly, and was discharged as well on February 15, 1929.

Cultures showed pure growth of *B. welchii*.

CASE 2.—December 1, 1928. No. 116830, female, age fifty-five.

*Condition on Examination.*—Strangulated postoperative ventral hernia. Symptoms began ninety-six hours before entering hospital.

*Operation.*—Adhesions were freed and enterostomy was performed in loop proximal to the loop incarcerated in hernia sac. The intestine was not gangrenous.

Twelve to five, patient's bowels moved; there was no vomiting and fluids were retained by mouth.

Twelve to seven, skin discolored in the region of the wound; crepitation extending several centimeters wide of incision. Opened wound wide of the limits of gangrene present and excised the necrotic tissue. Dakin tubes were inserted and the excavation was flooded with Dakin's solution.

One hundred cubic centimeters of anaërobic antitoxin and four hundred cubic centimeters of 10 per cent solution of glucose were given intravenously. The general condition showed a definite improvement after the debridement and the administration of antitoxin.

On December 9 the patient expired.

Cultures contained *B. welchii* and other anaërobic bacteria and colon bacilli.

*Autopsy Report.*—Gangrene of operative wound; general peritonitis, acute; pelvic peritonitis, chronic; salpingitis, chronic.

We feel the anaërobic antitoxin was a valuable aid in the treatment of these two patients and that it should be more generally used in any toxemia resulting from bowel obstruction or peritonitis.

490 Post Street.

## THE LURE OF MEDICAL HISTORY

### HIPPOCRATIC MEDICINE\*

#### PART II

By LANGLEY PORTER, M. D.

San Francisco

#### THE ASKLEPIAD

UNDER these circumstances it could not be expected that scientific medicine should hold the field undisputed. Theurgic medicine, the Christian Science of that day, flourished, so much so, that the Asklepiad Brotherhood, in whose ranks the Hippocratic tradition was born and nurtured, had its origin indirectly from temple healing. So many were the patients that flocked to the shrines of the god of healing, Asklepius, that there was an overflow of sick people who had to be treated. Furthermore the priests accepted only those they had invited for treatment, so that at Epidaurus, at Cos, or at Tricca, and a score of other temple towns, there were always many sufferers in need of aid. There arose then this group of lay physicians bound in a brotherhood, called the Asklepiad, who devoted themselves to the care of such invalids. So successful were they, and so divorced from temple practice, that through them developed a truly scientific attitude toward the study and treatment of disease. Although some students of the subject are unconvinced, it seems undoubted that, in this way, unattached to the temple, but dependent on it for patients, the Asklepiad Brotherhood rose and flourished. So successful was it that it produced great masters of the art, like Hippocrates, and great schools like those at Cos and Cnidus. So entirely successful that, based on the tradition it established, there arose later on, the still greater schools of Alexandria, Pergamos, Smyrna, and a host of others, and there emerged such famed physicians as Herophilus, Erasistratus in Alexandria, and Galen in Pergamon and Rome.

The temples of Asklepius were always placed in beautiful situations, charming and salubrious, where sparkling springs rose near pleasant wooded hillsides. These temples had all those attributes of restful attractiveness that lie at the root of the popularity enjoyed by the European spas. People flocked to the temples certain of the healing power of the god and, almost invariably, they went away refreshed and heartened, if not healed. Many times they, as do some of our friends of today, played one power against another, and resorted to the practitioners of lay medicine on their way to or from their treatment at the hands of the servants of the divinity, the temple priests.

One feature of interest to the modern physician was the abaton. This was a lofty outdoor sleeping porch where the patients, lying in their beds day and night, awaited the pleasure of the god. It was understood that the deity would visit them

\*Read before the San Francisco County Medical Society, January 14, 1930.

Part I was printed in the March issue.

as they slept, revealing himself as they dreamed. He always did—his priests saw to that—and a few days, or hours later, the patient left the abaton.

Of course, the treated one made proper returns in the shape of donations of money and of various small animals or birds, sacrificed on the altars of the temple; and these had to be purchased at a price from the priests. Another type of offering was the so-called votive gifts; these were terracotta casts (sometimes they were fabricated of ivory or precious metals) of the afflicted parts. These were left at the temples, much as patent medicine testimonials are written by the grateful today. Sometimes they were placed before the altar of the god preceding a cure, in order that he might not, in his hurry and the stress of overwork, forget the part that the supplicant wanted healed. These votive offerings make a fascinating collection of primitive pathology. To a gathering like this those votives, representing diseased pulmonary organs and various manifestations of bone tuberculosis, might be of great interest. There are many of them to be found in various European museums and some also are depicted in the literature of medical history.

#### SOME EXCERPTS FROM ANCIENT TEMPLE RECORDS

In his history of medicine, Singer deals interestingly with the matter of the temple methods and quotes the records of several of their reputed cures—among the most interesting, that of the man who had an abdominal abscess. "He saw a vision and thought that the god ordered the slaves who accompanied him to lift him up and hold him so that his abdomen could be cut open. The man tried to get away, but his slaves caught him and bound him. So Asklepius cut him open, rid him of the abscess, then stitched him up again, releasing him from his bonds. Straightway he departed cured, and the floor of the abaton was covered with blood."

Another such record runs:

"A certain Teucer, afflicted with epilepsy, went to the Asclepieion at Pergamus and besought the god to heal him. Asklepius appeared, as usual, in a dream, and asked whether he would like another disease instead. Teucer replied this was not his most earnest desire—in fact, he would rather be healed entirely; but if that was impossible, and the other disease less troublesome, he would accept it. The god replied that it was less troublesome, and was also the best cure for his complaint. Thereupon he was attacked by a quartan fever, but was delivered from his epilepsy."

This suggests that the influence of malarial fever in mitigating convulsive seizures was not unknown as long ago as 500 B. C.

The entire freedom of the lay medicine of the Hippocratic tradition from such supernatural influences is clearly demonstrated by the writer of the book called "Concerning the Sacred Disease" who discourses as follows:

"I am about to discuss the disease called 'sacred.' It is not, in my opinion, any more divine or more sacred than other diseases, but has a natural cause and its supposed divine origin is due to men's inexperience and to their wonder at its peculiar char-

acter. Now while men continue to believe in its divine origin because they are at a loss to understand it, they really disprove its divinity by the facile method of healing which they adopt, consisting, as it does, of purifications and incantations. But if it is to be considered divine just because it is wonderful, there will be not one sacred disease, but many, for I will show that other diseases are no less wonderful and portentous. . . ."

The contrast between the methods of these temples and the practice of the Hippocratic physicians is nowhere better illustrated than in the paragraphs of the Corpus dedicated to "Operative Requisites in the Surgery," which reads:

"The patient, the operator, assistants, their number; the light, where and how placed; the instruments which he uses, how and when; the patient's person and the apparatus. The operator, whether seated or standing, should be placed conveniently to the part being operated upon and to the light. Now there are two kinds of light, the ordinary and the artificial, and while the ordinary is not in our power, the artificial is in our power. Each may be used in two ways, as direct light and as oblique light. Oblique light is rarely used. With direct light, so far as available and beneficial, turn the part operated upon toward the brightest light, except such parts as should be unexposed and are indecent to look at; thus, while the part operated upon faces the light, the surgeon faces the part, but not so as to overshadow it. For the operator will in this way get a good view. . . . The nails of the operator neither to exceed nor come short of the finger tips. Practice using the finger ends. Practice all operations with each hand and with both together, your object being to attain agility, speed, painlessness, elegance and readiness. Let those who look after the patient present the part for operation as you want it, and hold fast the rest of the body so as to be all steady, keeping silence and obeying their superior. . . ."

#### HIPPOCRATES

Of Hippocrates himself, we know little—the time of his birth, 460 B. C., the fact that Plato referred to him with approval and that Aristotle acclaimed him "The Great"; that, within a few years, legend had enshrined him in an immortality of the supernatural. Bees building their hives on his grave produced a honey, it is said, which was a panacea for aphthous stomatitis. Miraculously he stayed the plague in Athens, although reliable historians tell us he never was in that city. We do know that, of the writings attributed to him, some were written before he was born, many after his death, and only a few could possibly have been from his own hand. The works attributed to Hippocrates constituted, in fact, a library gathered at one of the great schools of medicine which, after Hippocrates' death, carried on the high Asklepiad tradition at Alexandria, Pergamon, Smyrna, and a number of other centers in Asia Minor. Asia Minor and Egypt, we must remember, in the third and second century B. C., were the richest parts of the world, alive with commercial, artistic and intellectual activity.

#### THE HIPPOCRATIC WRITINGS

The Hippocratic writings most probably were from Pergamon, which was the city nearest to the ancient school of Cos, whence came Hippocrates himself.



Jones analyzes the Books of the Corpus as falling into six categories:

1. Texts for physicians.
2. Texts for laymen.
3. Prospects for or reports on research.
4. Lectures or essays, some given to students of medicine, some to laymen.
5. Essays by philosophic minded laymen interested enough in medicine to want to philosophize about it.
6. Notebooks or scrap books—a medley.

Three hundred years elapsed between the origins of the earliest and of the latest books, which divided into a pre-Hippocratic and a Hippocratic group.

A reading of the Hippocratic books makes it quite evident that the great mass of diseases, other than surgical, which came to the Greek physician for treatment, were diseases of long duration. The commonest were epidemics of various types, malaria, fevers of the typhoid group, epileptic seizures and phthisis, so named because of its most striking symptoms, wasting. Even today, with all our instruments and all our organized efforts to make an early diagnosis of pulmonary tuberculosis, we fail very often. Is it, then, any wonder that the Greeks, two thousand years ago, under the social and scientific circumstances, knew the disease imperfectly and only in its more developed stages? Yet, what they did know remained practically all that was known down to the days of Laennec, except for a little that was added in the fourth century A. D. by Areatus the Cappadocian, who took empyema out of the category of pulmonary phthisis and wrote illuminatingly of cavitation—ulcer he called it.

One of the most striking things in the Greek literature of the disease is the expressed belief in the influence of external surroundings as a factor in producing it.

The Hippocratic physician was keenly interested in prognosis—this for two reasons. As has been said, he had to sell scientific medicine to a skeptical and stiff-necked generation. His chance of success was greater if he could impress the sick man by recounting the various pains and discomforts that had followed his falling ill, and outline for him, with a fair degree of probability, what the future held in store; also it was to his advantage if he could foretell death or recovery with a reasonable approximation to accuracy. In the former case, he could clear his skirts of blame and in the latter, gain credit for good work accomplished. When it is considered that most of the Greek physicians were passing from town to town, and from city to city, strangers to those they served, the need for some impressive approach, such as accurate prognosis, becomes apparent.

The most famous Hippocratic passage taken from the book entitled "Prognostics" is an instruction in foretelling the approach of death. Thus it is written:

"You should observe thus in acute diseases: first, the countenance of the patient, if it be like those of persons in health, and especially if it be like itself, for

this is best of all. But the opposite are the worst, such as these: a sharp nose, hollow eyes, collapsed temples; the ears cold, contracted, and their lobes turned out; the skin about the forehead rough, stretched and parched; the colour of the face greenish, dusky, livid or leaden.

"If the countenance be such at the beginning of the disease, and if this cannot be accounted for by the symptoms, inquiry must be made whether the patient has been sleepless, whether his bowels have been very loose, or whether he has wanted food. If any of these be confessed, the danger is to be reckoned so far the less, and it will become obvious in a day and night whether or not the appearance came of these. But if no such cause exist and if the symptoms do not subside in this time, be it known for certain that the end is at hand."

#### THE HIPPOCRATIC TEACHING CONCERNING NATURE

The great underlying thought in the Hippocratic teaching was that nature tended to bring about a cure, and that the physician's duty was to intervene as little as possible, and then only to remove hindrances to the natural processes. The rôle that air plays in maintaining life was recognized, the breath was identified with the soul, and as the source of innate heat without which life and thought were impossible. The idea that Aristotle later expressed, of "fire without flame or spark," runs throughout the Hippocratic teachings. In the book "Concerning Ancient Medicine," which there is good reason to believe is from Hippocrates' own hand, it is written:

"Medicine has long had all its means at hand, and has discovered both a principle and a method through which the discoveries made during a long period are many and excellent, while full discovery will be made, if the inquirer be competent, conduct his researches with knowledge of the discoveries already made, and make them his starting point." The writer goes on to make the following criticism: "For most physicians seem to me to be in the same case as bad pilots; the mistakes of the latter are unnoticed so long as they are steering in a calm, but when a great storm overtakes them with a violent gale, all men realize clearly then that it is their ignorance and blundering which have lost the ship. So also when bad physicians, who comprise the great majority, treat men who are suffering from no serious complaint, so that the greatest blunders would not affect them seriously—such illnesses occur very often, being far more common than serious disease—they are not shown up in their true colours to laymen if their errors are confined to such cases; but when they meet with a severe, violent and dangerous illness, then it is that their errors and want of skill are manifest to all."

The same clear-sighted search for the practical is manifest when the author writes:

"I declare, however, that we ought not to reject the ancient art on the ground that its method of inquiry is faulty, just because it has not attained exactness in every detail, but much rather, because it has been able by reasoning to rise from deep ignorance to approximately perfect accuracy, I think we ought to admire the discoveries as the work, not of chance, but of inquiry rightly and correctly conducted." "I also hold that clear knowledge about natural science can be acquired from medicine and from no other source, and that one can attain this knowledge when medicine itself has been properly comprehended, but till then it is quite impossible—I mean to possess this information—what man is—by what causes he is made, and similar points accurately. I think a physician must know, and be at great pains to know about natural science, if he is going to perform aught of his duty, what man is in relation to foods and drinks and



to habits generally, and what will be the effects of each on each individual. It is not sufficient to learn simply that cheese is a bad food, as it gives a pain to one who eats a surfeit of it; we must know what the pain is, the reason for it, and which constituent of man is harmfully affected."

In those days the errors of approach seem to have been much the same as today, for the writer says:

"I am aware that most physicians, like laymen, if the patient has done anything unusual the day of the disturbance—taken a bath or a walk, or eaten strange food, these things being all beneficial—nevertheless assign the cause to one of them, and while ignorant of the real cause, stop what may have been of the greatest value."

Again there is insistence on the need for reality as the guiding principle of practice, as expressed in the following lines:

"Time is that wherein there is opportunity, and opportunity is that wherein there is no great time. Healing is a matter of time, but it is sometimes also a matter of opportunity. However, knowing this, one must attend in medical practice not primarily to plausible theories, but to experience combined with reason."

The likeness of the thinking that these ancients did about structures and function to our own, is illustrated in many other places in "Ancient Medicine"; by this passage in particular:

"I hold that it is also necessary to know which diseased states arise from powers and which from structures. What I mean is, roughly, that a "power" is an intensity and strength of the humours, while "structures" are the conformations to be found in the human body. . . ."

The word "powers" really is used to mean what we call function. Of course, as Littré, the greatest modern student of Hippocrates, said:

"Things were in a rudimentary state, that is, so far as background and the theory went; but not on the side of observed fact and of deduction from observation. In the matter of treatment, especially of surgical treatment, there are records in the Hippocratic writings that the best modern physicians would have no need to be ashamed of. For instance: 'The aged endure fasting more easily; next adults; next young persons, and least of all children, and especially such as are the most lively.' Again: 'Growing bodies have the most innate heat; they therefore require the most nourishment, and if they have it not, they waste.'"

If fever persisted fifteen days after the onset of a pneumonia the Hippocrateans presumed the presence of pus, and proceeded to evacuate it by incision with knife or cautery. Their advice shows that they knew something of immediate auscultation. The physician is instructed to shake the patient by the shoulders, placing his ear to the patient's chest in order to determine by the location of the sound on which side the fluid is. (Also, the wash leather-like creak of dry pleurisy is described.) If no sound is heard, one is to choose for incision the point where there is most pain; or, failing such a localization of pain, a procedure based on the presence of a localized increase in temperature is advised as follows:

"Cover and wrap the thorax in a thin linen cloth that has been wrung out in a warm suspension of potter's clay and, on the side that cools, cut or cauterize as near as possible to the diaphragm, taking care not to wound it."

That they knew of appendicitis, perityphlitis and peritonitis, is clear to those who read the book called "Prognostics," which says:

"It is best for the hypochondrium to be free from pain, soft and with the right and left sides even; but should it be inflamed, painful, distended, or should it have the right side uneven with the left—all these signs are warnings." "A swelling in the hypochondrium that is hard and painful is the worse, if it extends all over the hypochondrium; should it be on one side only it is less dangerous on the left. Such swellings at the commencement indicate that soon there will be a danger of death, but should the fever continue for more than twenty days without the swelling subsiding, it turns to suppuration." . . . "But whenever the swellings in these regions are protracted one must suspect suppurations. Collection of pus there ought to be judged of thus. Such of them as turn outward are most favorable when they are small, and bend as far as possible outward, and come to a point; the worst are those which are large and broad, sloping least to a point. Such as break inwards are most favourable when they are not communicated at all to the outside, but do not project and are painless, while all the outside appears of one uniform colour. The pus is most favourable that is white and smooth, uniform and least evil smelling. Pus of the opposite character is the worst." . . .

University of California Medical School.

(Part III of this paper will be printed in the May issue.)

## CLINICAL NOTES AND CASE REPORTS

### ECTOPIC VENTRICULAR TACHYCARDIA

WITH PROBABLE ACUTE CORONARY THROMBOSIS,  
AND HAVING A VERY UNUSUAL ELECTRO-  
CARDIOGRAPHIC TRACING

#### REPORT OF CASE

By R. MANNING CLARKE, M. D.

Los Angeles

MRS. T. S., age fifty-three years, had been a very well woman until forty-four years of age. At this time she was operated upon for a tumor of the uterus. Patient suffered an attack of bronchopneumonia twice in the same year following the surgery. There was no other infectious history. After this experience, trouble with her heart increased until the time of her death, which occurred thirty-six hours after my consultation.

My physical examination revealed the following essentials:

The temperature was 100 to 104 degrees, pulse 90 to 120, blood pressure 150-90, having suddenly dropped from 200-110 the day before.

Cyanosis, dyspnea, edema, and coughing were extreme, there having been a sudden increase of dyspnea coincidentally with the drop in blood pressure the day before.

There were no thrills. The liver was five centimeters below the costal margin. The left leg was larger than the right and very sore and painful, especially below the knee.

The left border of the heart was fifteen centimeters from the midsternal line. The right border was not located. There was marked dullness in both bases and along the spine.

The rate was 120. The sounds were very hard to distinguish and tick-tack in character. There were no murmurs. There were heavy râles in both lungs.

**Laboratory Findings.**—The urine showed a specific gravity of 1.018; PH 5.8. Hyaline and granular casts were both present, with albumin 1.25 per cent.

There was a leukocytosis of 21,700, with polymorphonuclears 88 per cent. Wassermann and blood culture were both negative.



The electrocardiographic tracing is shown in the accompanying illustration. The unusual thing about it is the alternation of the QRS complex.

We know that the impulses are of ventricular origin because the auricles are beating on a separate rhythm, and can be seen disturbing the constancy of the iso-electric line between the QRS complexes.

The paroxysm began before I saw the case and continued until her death. Were it possible to see the beginning and ending of the attack on an electrocardiographic tracing we would then have further proof that the origin of the impulses was ventricular. In other words, the attack would begin with an aberrant ventricular complex that would be premature (not preceded by a P wave) and there would be a postparoxysmal compensatory pause, after the last beat as after any ventricular extrasystole. Such a tracing, identical with this one, is reported by Reid of Boston in his excellent book, "The Heart in Modern Practice," second edition, 1928, Lippincott, pp. 257. In this tracing, Reid was fortunate enough to obtain the entire paroxysm, and the above stipulations show very nicely.

This case was seen by several consultants in rapid succession, and the controlling physician was also changed twice in the last few weeks of her life. On this account supervision was more or less erratic. I was unable to determine the dosage of digitalis except in the last eleven days of life. *During this time the average daily dose was 1.5 drams of the tincture or its equivalent in digifolin.*

The cases I have been able to check occurred with excessive digitalis administration, or coronary thrombosis with infarction of the myocardium, or both.

In this case no necropsy was obtainable, but I made a diagnosis of acute coronary thrombosis, based on sudden increase of dyspnea and drop in blood pressure occurring the day before my consultation, along with the thrombosis of the posterior tibial and popliteal veins in the left leg.

606 South Hill Street.

## APPARATUS USED IN TREATMENT OF FRACTURES OF THE PELVIS\*

By SAM HERZIKOFF, M. D.  
Los Angeles

I READ with interest an article recently published in CALIFORNIA AND WESTERN MEDICINE, submitted by Doctor Harding of San Diego, in which he described his method of treating fractures of the pelvis by the use of a sling and suspension of the patient. I was prompted by the article to mention that I have been using this method at the Golden State Hospital for the past five years in cases of fractures of the pelvis where there is wide separation of the fragments, especially in the region of the symphysis pubis. I quite agree with Doctor Harding on his condemnation of the swathe, plaster spica, Bradford frame, and

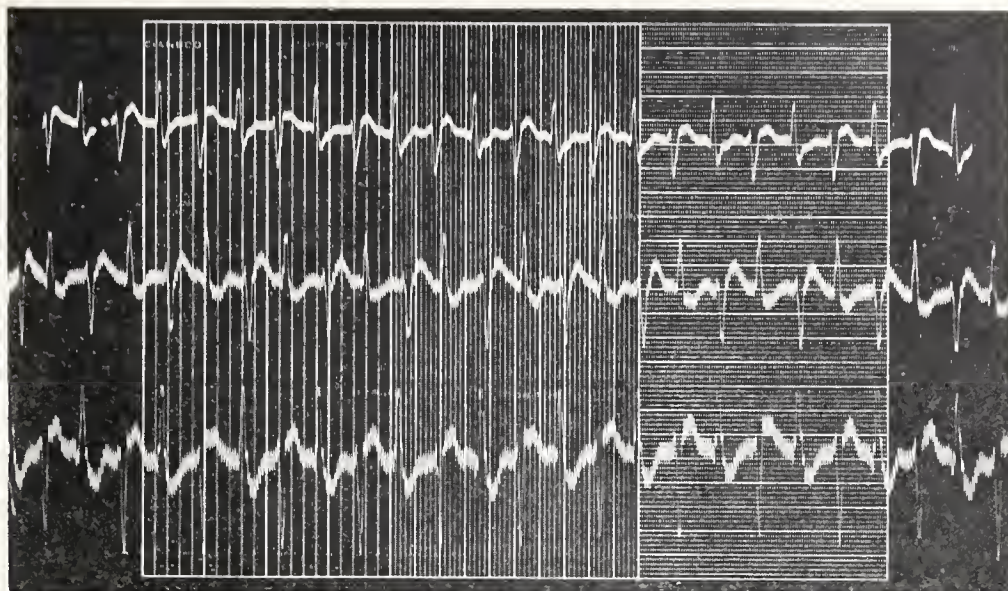


Fig. 1.—Electrocardiographic tracing

Thomas splint. I have never been able to see the value of applying a spica cast to these cases except for the comfort which it gives the patient. The cast could not be used to maintain compression of the fragments during healing without inflicting soft tissue damage from pressure. The doctor has covered well the various points in the treatment of these cases.

About five years ago the idea of treating these cases by suspension and a sling first came to me when I was called upon to treat a patient with at least a two-inch separation of the symphysis. By means of a "block and tackle" apparatus we were able to suspend the patient, supported on a sling, at any height desired. By the use of multiple pulleys we were able, by the application of only a few pounds of weight, to perfectly balance the position of the patient. A sketch of our apparatus is submitted. It is extremely simple and can be applied in a few moments. The patient can be raised and lowered in the bed at will to permit nursing care and the use of the bedpan. If the weights are properly balanced the patient will remain in any desired position. The pelvis can be partially or completely lifted from the bed as the individual case indicates and in this way one can control the amount of lateral pressure induced. It will be noted from the sketch that there are two overhead bars. Each end of the sling,

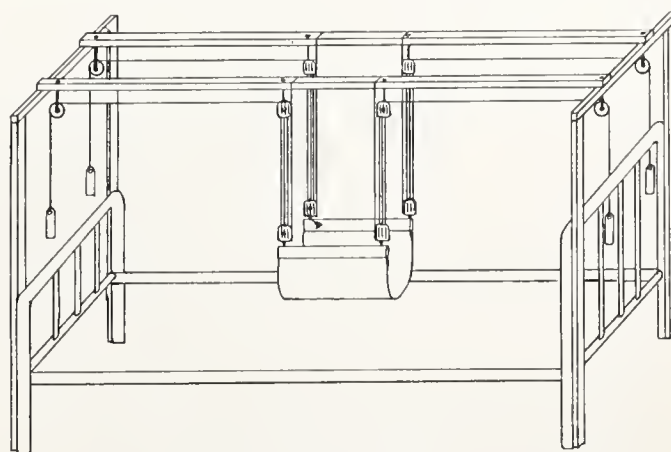


Fig. 1.—Apparatus used in treatment of fractures of the pelvis.

\* From the Golden State Hospital, Los Angeles.



being suspended from a separate bar, permits the application of any desired amount of lateral pressure by adjusting the distance between the two bars. No special apparatus is required. A windlass is not necessary.

Our method is essentially the same as Doctor Harding's, but I feel that it is advantageous because:

1. The suspension can be balanced and permits greater comfort to the patient.

2. The position of the pelvis can be raised or lowered by the use of one hand and very little force.

3. If the patient raises himself, the sling also raises, and thus pressure is kept constant. This is not possible with Doctor Harding's apparatus.

4. It is also possible to turn the patient partially on the side and still maintain constant compression.

5. No special apparatus is necessary.

I agree with Doctor Harding's ideas in the treatment of these cases and feel that his method is very useful.

1212 Brockman Building.

## INCOMPLETE INVERSION OF UTERUS WITH SUBSEQUENT PREGNANCY

### REPORT OF CASE

By LAWRENCE F. WHITE, M. D.

Los Angeles

**I**NCOMPLETE inversion of the uterus following delivery and expression of the placenta, though not rare, is an uncommon accident, and is ordinarily recognized at the time of its occurrence. It is, therefore, of especial interest that this condition could have been present in a young woman for a period of six weeks, causing only bleeding and a rather severe secondary anemia, and that it should have remained so long without attention or recognition.

### REPORT OF CASE

On April 19, 1929, the patient, a white, married woman, age twenty, was admitted to the California Hospital on the surgical service. She complained of extreme weakness and continued vaginal bleeding. Her history revealed that she had been delivered of a living baby six weeks before. So far as she knew, the labor and delivery had been quite normal, but she had had more than the usual amount of bloody discharge during her ten-day stay in the hospital. She had continued to bleed, vaginally, after going home, at times discharging large clots. She had had no cramps nor pain, but had become increasingly weak. There had been no other pregnancies. The past history and family history were not unusual.

On hospital entry (six weeks following delivery) physical examination showed the skin and mucous membranes to be very pale; the eyes and skin suggested dehydration, the face drawn and apprehensive. Temperature, 98.4 Fahrenheit. Pulse rate, 104 (easily compressed). Blood pressure, 105/70. Respiration, 20. The blood picture was: hemoglobin, 40 per cent; color index, .62; red cells, 3,224,000; white cells, 7300; neutrophils, 76.5 per cent; lymphocytes, 17.5 per cent; large mononuclears, 5.5 per cent; eosinophils, 0.5 per cent.

She was grouped for blood transfusion and on April 20 was given 700 cubic centimeters of whole blood by the Unger method, using fasting donors, whose serum and cells had been cross-agglutinated with those of the patient. Immediately following the transfusion, examination under gas anesthesia revealed a large, globular mass protruding through a dilated cervix into the vagina. The picture was one of incomplete inversion of the uterus, which had been present for six weeks. The endometrium of the inverted portion was not grossly ulcerated nor inflamed, but was, however, very edematous and boggy to the touch. Manipulation and attempts at replacing the inverted fundal portion resulting only in placing the mass just within the external os of the cervix, it was thought expedient to pack the vagina and await improvement in the patient's general condition before making further attempts at reposition.

On April 22, under general anesthesia, another attempt was made to replace the inverted organ from the vaginal route. This was without success. The uterine tissue appeared to be too friable to permit of abdominal reposition by the use of multiple Allis forceps as advocated by Huntington, Frederick and Kellogg.<sup>3</sup> Therefore two heavy chromic sutures were placed in the apex of the mass, a small incision was made, and these sutures or guys were pushed through into the abdominal cavity. The vagina was carefully treated with antiseptic solutions and then the abdominal cavity opened by a subumbilical midline incision. From this aspect a typical picture of incomplete uterine inversion was seen. The fallopian tubes, the broad ligaments, and the round ligaments were tightly drawn downward into the outpocketing formed. The color of these tissues was good, but they were more friable than normal. By gentle but firm traction upon the guy sutures previously placed, the inversion was corrected and the structures restored to their usual relations. The incised wound in the fundus was carefully repaired, drainage tubes placed, and the abdominal wound closed.

A pelvic peritonitis of mild degree developed, but this cleared up shortly and the patient made an otherwise uneventful recovery. Examination, approximately three months after discharge from the hospital, revealed that the patient was pregnant again. The uterus was in good position and the cervix normal in appearance.

It is an interesting fact that a considerable number of individual cases of inversion of the uterus are reported in the literature, while most authorities state that this condition is extremely rare. Eden<sup>2</sup> found it occurring in England once in 180,000 labors; Williams says that Beckmann reported 250,000 cases with none of inversion at St. Petersburg Lying-In Hospital, and that Madden reported 190,833 cases of labor with one inversion at Dublin.

Several different methods have been suggested for effecting reposition of the displaced organ. The technique of these various operative procedures is carefully discussed by Dr. Reuben Peterson,<sup>5</sup> to whose excellent articles those interested are referred. It appears that as a rule manual reduction vaginally becomes increasingly difficult in proportion to the length of time the condition has existed. Certain cases of spontaneous reposition have occurred, the uterus apparently automatically resuming a normal position after the swelling, edema, and cervical spasticity of a recent inversion have subsided. Hysterec-tomy is rarely necessary, even in cases of rather long duration. Miller<sup>4</sup> cites an instance in which inversion was corrected after seven months, and



in which a normal pregnancy and labor subsequently occurred. This same writer has collected fifty-six cases of inversion in the literature in which one or more subsequent pregnancies took place.

Meddlesome procedures in the third stage of labor are held responsible for a major portion of the inversions encountered. Probably, as stated by several writers, a fundamental weakness of the uterus and its supporting structures is essential, but haste and overenthusiasm usually unite with such weakness to produce the lesion. Donavon<sup>1</sup> emphasizes the following causes of uterine inversion, of which the first two are much the most important:

1. Traction on the cord.
2. Too vigorous compression of the fundus.
3. Sudden delivery, especially if the mother is standing.
4. Exertion after delivery, *e. g.*, coughing.
5. Short cord, of whatever etiology.

511 California Medical Building.

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**Psittacosis—Or Parrot Disease.**—Following the discovery of several cases of psittacosis in Annapolis and Baltimore, traced to parrots supplied by a wholesale dealer in this city, an investigation is now being made of several suspicious cases reported to the Department of Health from various parts of New York City.

The disease in parrots has been recognized for over fifty years, the first cases occurring in various parts of Europe. The causative organism is the *Bacillus psittacosis*, an organism related to the paratyphoid group. In parrots the disease is characterized by enteric symptoms; transmitted to man, the infection more usually manifests febrile and respiratory symptoms resembling influenza, pneumonia being a common complication. The course of the disease in humans varies; at times there is a case fatality of 20 to 25 per cent. The following excerpt from Chalmers and Castellani's work on tropical medicine may be of interest to our readers:

"History.—Ritter, in 1879, was the first to suspect that there was a connection between small epidemics of pneumonia limited to certain houses and an illness among parrots in the same houses. In 1880 Eberth obtained large numbers of micrococci from the bodies of gray parrots. Ritter's observations were confirmed by Ost of Berne, in 1882, and by Wagner of Leipzig, in 1885. In 1892, 500 parrots were shipped from South America for Paris, but no less than 300 died en route from enteritis. On arrival in Paris the surviving birds were divided into two lots and sold to various people, with a result that within twenty-six days of their arrival an epidemic of psittacosis broke

out, which resulted in forty-nine cases, with sixteen deaths. The epidemic was characterized by being of the house type, by which is meant that several persons in the same house were attacked by the complaint.

"Smaller epidemics occurred in 1893 and 1894, and in the same year Banti, Malenchini and Palamidessi reported an epidemic in Florence. In 1895 there were outbreaks in Prato, Cologne and Paris; in 1897 at Genoa; in 1898 at Cologne; in 1901 at South Elpidio, Ancona and Hull; in 1904 at New Hampshire, one of the eastern United States of America. Beddoes in 1914 reported several cases in England. We have seen epidemic enteritis of this nature develop in parrots in the Sudan, but prophylactic measures being immediately instituted it did not spread to man.

"Etiology.—The disease is apparently due to a bacillus belonging to the genus *Salmonella* Lignières of our classification, first isolated from the wings of parrots which had died from the disease by Nocard in 1893, and subsequently found by Gilbert and Fournier in 1897 in the intestine of the sick birds, and also in the heart blood of a man who died from the disease. The bacillus in question is pathogenic for parrots and other birds. It is possible that this bacillus exists normally in parrots, and only becomes pathogenic under circumstances of bad hygiene, when it causes an enteritis. The feathers, becoming contaminated with fecal matter, are cleaned by the parrot with its tongue in the usual way, so that its mouth and bill become infected, and by this means the disease is spread to persons who feed or caress the bird. Very rarely the disease spreads from man to man. According to Bainbridge, *Bacillus psittacosis* is identical with *Bacillus aertryke*.

"Symptomatology.—The incubation period varies from seven to twelve days, after which the disease may begin suddenly with a chill, but more usually commences insidiously, like typhoid fever, with headache, malaise, etc., and a rise of temperature from 102 to 104 degrees Fahrenheit, with a pulse rate of 100 to 120 per minute, quickened respirations, cough, and mucopurulent expectoration. Râles may be heard over the lungs, while the spleen is enlarged, the tongue dry and furred, and diarrhea or constipation may be present. Rose-colored spots appear on the skin, and the patient becomes dull and stupid, in which condition he may remain for several days, and as a rule will recover in about fifteen to twenty days if no pneumonic complication intervenes. If, however, pneumonia sets in, the patient becomes much worse, and as a rule dies.

"Diagnosis.—The diagnosis is to be made by the discovery of sick parrots in houses in which people are suffering from typhoid-like fevers and pneumonia. Bacteriologically, attempts may be made to obtain cultures of the bacilli from the blood.

"Prognosis.—The prognosis is grave in old people and when pneumonia sets in, the mortality being stated to be about 35 to 40 per cent.

"Prophylaxis.—The infected parrots appear always to come from South America; therefore care should be taken that only healthy birds are allowed to be shipped, and that these are kept in good hygienic conditions during the voyage. On arrival at their destination, they should be quarantined for about a couple of weeks, and, if found to be infected, should be destroyed, and their dead bodies and cages burned. The places in which they were kept should also be thoroughly disinfected. Parrots should not be allowed to take food out of people's mouths, and should always be kept in good hygienic conditions."

Physicians encountering suspicious cases are requested to notify the Department of Health, which will gladly carry on the bacteriological and epidemiological investigations necessary to determine the nature of the disease. In all such cases it will be well to see that any sick or dead parrot is not disposed of, for the bacteriological examinations of the bird are very important in establishing the source of the infection.—*Weekly Bulletin City of New York Department of Health*, January 11, 1930.



# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

## LOCAL COMPRESSION THERAPY IN THE TREATMENT OF PULMONARY TUBERCULOSIS

FRANK S. DOLLEY, LOS ANGELES.—Given a patient with chronic productive infraclavicular tuberculosis with general pleural adherence where healing is prevented by the presence of one or more small cavities, the procedure that will sacrifice the least amount of lung tissue with minimal danger to the patient is pneumolysis with local pulmonary compression.

Bilateral chronic apical disease with cavitation, which is responsible for the continued presence of tubercle bacilli in the sputum, constantly endangers the patient by possible extension. Thoracoplasty is definitely contraindicated. Pneumothorax is prevented by pleural adhesions. Pneumolysis and local compression, applied first to one side and later the other, may serve to accomplish a cure.

Occasionally following an extensive thoracoplasty a pulmonary cavity persists; a menace to the contralateral lung. If further rib resection seems inadvisable, local compression often achieves success.

Pulmonary hemorrhage may be arrested by pneumolysis and local compression if thoracoplasty seems too severe and other methods are unsuccessful.

Pneumolysis is the initial procedure in all local surgical compression therapy. This is accomplished by careful freeing of the lung together with its visceral and parietal pleura from the chest wall well around the involved area, so allowing the pulmonary tissues of this region to collapse downward and inward. The immediate result is very satisfactory if the cavity walls are not too stiff. Without an extensive thoracoplasty, however, and this is just what a local operation aims to avoid, a dead space is left which eventually will be obliterated by the formation of adhesions between the collapsed lung and chest wall. Later contraction of these adhesions would, more or less completely, return the lung to its original position. Pneumolysis alone, therefore, is seldom successful in accomplishing permanent cavity collapse.

The prevention of reexpansion can be accomplished in two ways; either by gauze tamponade, allowing the extrapleural space to heal by granulation, or by the permanent insertion of some material that will compress the diseased pulmonary tissues and at the same time fill the extra pulmonary dead space, thus preventing pulmonary reexpansion.

1. Pneumolysis and gauze tampon: Sections of several ribs are resected wide about the area to be compressed in order to prevent adhesions which, forming between the collapsed lung and ribs, would pull apart the cavity walls. Rubber tissue is placed within the wound and sufficient gauze tightly packed in this to fill the space created by the lung collapse. The soft tissues are tightly closed over this packing and, if no infection occurs, the gauze is allowed to remain undisturbed eight to twelve days. It is then removed and the wound is packed wide open, allowing the space to heal gradually by granulation.

2. Pneumolysis with the insertion of some substance that is not to be removed: A short section of one rib only is removed. The parietal pleura is separated carefully from the chest wall until the lung over the area to be collapsed is freed. Many substances have then been inserted to exert pulmonary compression; fat, lipomas, muscle, fascia, etc. All these gradually shrink in size and allow the lung partially to reexpand, thus decreasing considerably the probability of operative cure. Of the materials so far utilized, paraffin is probably the most efficacious. It shrinks little, is somewhat elastic, and is practically nonirritating. Its melting point must be somewhat higher than body temperature. The addition of one per cent bismuth makes it radiotranslucent. It is inserted warm and plastic, small portions at a time until sufficient compression is obtained. The soft tissues are then tightly and permanently closed over it. It is essential for its use that pleural adhesions be present below in order that the paraffin, by its own weight, may not sink below the level of the pulmonary tissues to be collapsed. Hemostasis must be complete, since serum forming about the paraffin may burrow to the surface, discharge and eventually lead to the extrusion of the paraffin.

If infection occurs, the wound must be at once opened, the paraffin removed and gauze tamponade with wide rib resection resorted to.

Local compression is contraindicated if the cavity or cavities are near the pulmonary surface. The pressure of tampon or wax easily sloughs through a comparatively thin abscess wall.

The advantages of pneumolysis with local pulmonary compression are: (1) The operation is a comparatively minor one and is attended with little or no shock. (2) Paradoxical respiration does not follow, so the danger of aspiration into the lung areas is minimized. (3) The sacrifice of actively functioning lung tissue is very little. (4) It can be carried out bilaterally where other procedures are contraindicated.



Its disadvantages are: (1) Rupture into pleural cavity. If the pleural leaves are not solidly adherent, an extensive pleuritis that often proves fatal may develop. If pleural space is well walled off the pulmonary abscess drains externally, sometimes persisting for years. (2) Occasionally long after implantation the area surrounding the paraffin may become infected, demanding the latter's removal. Rib resection and gauze tamponade is then the resort of choice.

\* \* \*

F. M. POTTENGER, MONROVIA.—Doctor Dolley's discussion shows the ingenuity that the surgeon has been obliged to use in coping with the destructive phases of tuberculosis. It is a clear and concise presentation of the subject.

It was formerly taught that tuberculosis is an insidious disease and that all cases showing destructive lesions had been neglected in diagnosis. We now know that this is untrue; for tuberculosis often comes on as an acute process and shows cavity formation soon after clinical symptoms have first manifested themselves. The appreciation of the fact that tuberculosis often comes on as an acute destructive process is one of the real advances in our clinical conception. The fact that tuberculosis with insidious onset sooner or later goes over into an acute process, often with cavity formation, emphasizes the importance of immediate treatment when active disease has been diagnosed.

When acute destructive process with cavity forms in the lung, if the patient is put at rest immediately, preferably in an institution, and given the benefit of the well-recognized methods of treatment, a large percentage of arrests will result without collapse therapy of any kind. The danger of waiting is that pleural adhesions will form and that these will prevent effective collapse, should pneumothorax treatment be undertaken later. From the standpoint of choice, however, every patient who can secure healing of his pulmonary tuberculosis without any form of interference with his pleural space is in a better position as regards future physical efficiency than he would be were this principle disregarded. A cure may be brought about by the usual dietetic, hygienic regimen with bed rest in a large proportion of such patients in about a year's time; whether such method is going to be successful can usually be determined in five or six months' time. The disadvantage of a noninterference policy lies in the danger that pleural adhesions may form in the meantime and make pneumothorax out of the question. This has caused many to collapse such acute cavities as soon as the diagnosis is made. Pneumothorax does not produce its results any more quickly, for the lesion cannot heal short of many months. It does, however, permit the patient to be up and about sooner because it reduces or abolishes symptoms. This, however, is often of doubtful advantage, because rest and a careful regimen for a prolonged time is the best guarantee of permanent healing, whether a collapse therapy is employed or not.

Many of these cases start in apices which have previously been infected and which already are surrounded by a cap of pleural adhesions which preclude collapse by pneumothorax; others form adhesions during the period between cavity formation and attempted compression. In both of these, pneumolysis may bring about a favorable result.

One other group of cases in which pneumolysis is the ideal operation, provided it can produce a satisfactory collapse, is the type in which a permanent cavity forms in an apex surrounded by a pleural cap and adherent mediastinum. Tension from all sides holds such a cavity open and prevents compensatory closure. If such are treated by pneumolysis, or pneumolysis and a limited rib resection, the patient attains his result with the least loss of pulmonary tissue. Since most of these cases have had extensive involvement of pulmonary tissue outside of the area involved in the operative field, it is of great importance that the operation be done with the sacrifice of as little lung tissue as possible. For this reason pneumolysis makes a special appeal in such cases.

\* \* \*

PHILIP H. PIERSON, SAN FRANCISCO.—Doctor Dolley's discussion of this subject is naturally from the surgical point of view and very well taken, for there are instances in which surgical compression therapy is very helpful.

There are frequently medical measures which may be undertaken to much advantage before resorting to the therapy which Doctor Dolley has outlined. We are all often surprised at the marked healing power which absolute bed rest, to the point of "typhoid rest," will achieve. This method has to be carefully explained to the patient in order to get his complete coöperation. Complete relaxation periods of ten minutes by the clock, ten times a day, will accomplish more than months of restless bed rest. It should always be tried before any form of surgical therapy is undertaken.

The next thing which may be tried before surgical compression is the use of the sandbag. This form of therapy has been found to be most beneficial in many cases. The sandbag should be properly shaped to the affected side and held in position by straps to the head of the bed. This works to advantage particularly if the patient lies in a recumbent or semirecumbent position. I have used a sandbag weighing seven pounds and think it of sufficient weight. When applied one hour on and one hour off it may accomplish the desired effect. Judicious waiting for this form of therapy to show its result is often tedious but worth while.

The best form of mechanical brace that I have seen is one where a screw, supporting a pad, is adapted to the thorax and increasing pressure is applied over the desired area. Here again spectacular results are seen in some instances.

Artificial pneumothorax is a well-recognized form of therapy for local lung compression. Nature uses this cushion of air in a selective manner, more over the affected part of the lung



than the good portion. This is explained by the resiliency of the normal lung tissue keeping it in a more expanded state than over the diseased area, where the relief of pleural suction allows internal contractures to set up a localized compression. I recently saw a case in Davis where pneumothorax was only partially successful in collapsing a subclavicular cavity, it being held open by two adhesions about one centimeter in diameter. Thoracoscopic study had shown these too large to be burned by the Jacobsen method. Doctor Jessen removed about eight centimeters of the two ribs overlying this area and the relaxation of these adhesions brought about the local compression that was originally desired. In other instances adhesions may be severed and the local compression obtained.

The problem of apical cavities is one of the most difficult to handle, for thoracoplasty has frequently failed in its therapeutic value when applied to that region. It is here that pneumolysis or the resection of not only the posterior but the lateral and some of the anterior portion of the rib brings about the best compression. While speaking of thoracoplasty it should be said that lesions in the middle or lower portions of the lung are greatly benefited by thoracoplasty in a considerable number of cases, particularly if that thoracoplasty takes the ribs off up to and including the tips of the transverse processes of the vertebrae.

I feel that we are often in too much haste in performing more radical operations than phrenicectomy when, if sufficient time were allowed, the benefits of a less extensive operation would be manifest. Cavitation even as high as the clavicle, if given three or four months or even six months, may be completely closed and healed by phrenicectomy. There are other instances in which a mere crushing of the nerve will bring about a temporary paralysis of the diaphragm and thus give nature an opportunity to start the healing process even in disease of the upper portion of the lung.

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WILLIAM B. FAULKNER, JR., SAN FRANCISCO. Doctor Dolley's proposal of pneumolysis and tamponage as means of compression in the treatment of pulmonary tuberculosis is both timely and rational; and in selected cases this combined procedure should offer promising results; since it fulfills the strictest requirements of accepted therapy by:

1. Closing open lesions, controlling hemorrhage, and preventing spread of the disease.
2. Affording local pulmonary rest, compressing principally the diseased area, and preserving the actively functioning lung tissue.
3. Minimizing mechanical disturbances of the intrathoracic structures.
4. Being of benefit to patients in whom other compression methods have failed, or in whom other methods have been contraindicated.
5. Offering a low operative risk.

The successful employment of pneumolysis is so dependent on generalized adhesions overlying the diseased lung that one must determine in ad-

vance the presence, type, location, and extent of the pleural adhesions. This information cannot always be obtained from the study of plain x-ray plates, but following the use of a preliminary diagnostic pneumothorax and the interpretation of the accompanying postural roentgenograms, one is in a position to select that type of compression which seems best suited to the individual patient. If the diagnostic pneumothorax demonstrates an absence of generalized pleural adhesions, pneumolysis, tamponage, and other methods of treatment must give way to the continuance of pneumothorax. However, when "string-like" adhesions prevent a satisfactory lung compression, thoracoscopic examination, with severing of the adhesions by cautery, is both feasible and helpful.

If the diseased lobe is adherent to the diaphragm and to only that portion of the chest wall overlying the cavity, the respiratory-diaphragmatic movements exert an unfavorable tug on the walls of the cavity and tend to prevent healing. In such instances phrenic nerve section or avulsion is much more strongly indicated than is pneumolysis; but a patient with an immobile diaphragm and generalized pleural adhesions can expect little from a phrenic nerve section and must look to pneumolysis and tamponage for relief.

The employment of pneumolysis is also justifiable in the control of pulmonary hemorrhage if the surgeon can determine from which side the blood is coming, and if pneumothorax has not been effective. This localization of the source of bleeding is not always an easy task; for the abnormal physical signs may be equally marked and strikingly similar over both lungs, and one must depend on a bronchoscopic examination in selecting the site of operation.

Pneumolysis will find an almost universal place in the treatment of patients afflicted with bilateral apical cavernous tuberculosis, and will offer a ray of hope to those who are beyond the scope of other methods of treatment.

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China Raises Medical Standards.—The passing of the old-style uneducated Chinese physicians becomes imminent as a result of a resolution passed by the National Board of Health at its conference in Nanking in June. *Science Service* reports that the Board decided not to grant new licenses to unscientific practitioners after December 31, 1930.

Considerable agitation resulted among the two thousand or so old-style doctors in Shanghai. A meeting of protest was held and a strike of medicine shop employees took place. Posters appeared on the shutters of medicine shops pointing out the need of the old-style physicians and medicines, and the harm that would accrue to the nation if they were abolished. On the other hand, advanced opinion, while admitting the hardship worked on the old-style physicians, takes the stand that such an important step as refusing them new licenses should not be delayed for almost two years. It is pointed out that the ignorant classes in China will long continue to go to native old-style physicians, regardless of whether they are licensed to practice or not, so that the sooner definite steps are taken to fight this evil the better.

The old Chinese physicians are little more than quacks, and cause incalculable harm, both directly by their treatments and indirectly by keeping patients from seeing scientific physicians until too late to save the patients' lives.—*The Diplomat*, November 1929



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Telephone Douglas 0062

Editors . . . . .	{ GEORGE H. KRESS EMMA W. POPE
Associate Editor for Nevada . . .	HORACE J. BROWN
Associate Editor for Utah . . . . .	J. U. GIESY

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# EDITORIALS

THE FIFTY-NINTH ANNUAL SESSION OF  
THE CALIFORNIA MEDICAL ASSOCIATION AT DEL MONTE—TO BE  
HELD ON APRIL 28-MAY 1, 1930

*The Program of This Fifty-Ninth Annual Session.*—In this issue of CALIFORNIA AND WESTERN MEDICINE is printed the program of this year's annual session of the California Medical Association. This is the fifty-ninth year in which the California Medical Association may be said to have provided means for its members to meet in conference to discuss the various scientific and other problems of organized medicine, and through personal contacts with one another to fit themselves to return to their work with renewed strength and enthusiasm.

\* \* \*

*Members of the California Medical Association Should Plan to Attend This Del Monte Session.*—Recent annual sessions of the California Medical Association have seemingly given members of the organization who attended the meetings a more than adequate return for the time and expense involved in such attendance. This year's session at Del Monte, while lacking somewhat in the generous hospitality which is usually extended by component county units of larger size, is nevertheless in one of California's most charming settings. All who have attended annual sessions at Del Monte in the years gone by will desire to again renew their acquaintance with this region and its alluring scenery, and with our colleagues

of that district. Members who have not had that pleasure should make a special effort to attend this session, which will begin on Monday, April 28, and adjourn on Thursday, May 1.

\* \* \*

*The Scientific, Social and Business Features of the Session.*—A perusal of the scientific program as found in this issue will indicate how many are the interesting and important scientific topics which will come up for consideration and discussion, in the general and special sections. Our guest speakers are prominent colleagues from different sections of the country and our California essayists are also well known fellow practitioners.

The scenic charm and the hotel environment of Del Monte foretell also the best of fellowship, reunions and of social contacts.

What with meetings of the scientific assemblies and of scenic drives and walks and golf and dances in the way of social diversion, and of important business problems up for consideration by the House of Delegates, it may be taken for granted that the five days and their hours will flit by with amazing rapidity for all who can stay throughout the session.

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*Pre-Convention Bulletin and Standing Committees.*—This will be the first annual session to be held under the provisions of the revised constitution and by-laws. For the members of the House of Delegates, the *Pre-Convention Bulletin*, containing abstracts of reports of officers and standing committees, will make its first appearance. It is believed that members of the House, through this new medium, will be able to get a better orientation of the problems which will come up for their consideration.

The House of Delegates will also have its first experience with an official speaker. That plan should work out as advantageously in California as it does in the national association.

It is important for members of the standing committees to meet and organize and to discuss the problems which their respective groups are expected to investigate. The Del Monte session will make such conferences possible. The co-operation of additional colleagues, which can be secured through the appointment of two to ten advisory members to each committee, as provided in the constitution and by-laws, might likewise be one of the matters to which the members of standing committees could give consideration in their conferences.

\* \* \*

*The Woman's Auxiliary of the California Medical Association.*—The Woman's Auxiliary of the California Medical Association, which formed a tentative state organization at the last annual session at San Diego, will convene at Del Monte with at least a half dozen component county units represented. In passing, it is of interest to note that the newly formed auxiliary unit at Los Angeles, at the time of this writing reports a membership in excess of three hundred

and fifty. A leaflet compiled by order of the Council of the California Medical Association should make it easy for other county auxiliaries to come into existence in California.

It is to be remembered that these Woman's Auxiliaries are not to take up work belonging to the county medical societies, but to maintain interests and affiliations in fields and in organizations where the physician members of county medical societies do not contact, but where intelligent coöperation by members of a Woman's Auxiliary may be an additional means for promotion of the public health, through allegiance to proven standards of preventive medicine. The members of the Woman's Auxiliary in California each year will no doubt find more and more pleasure and profit in these state meetings.

\* \* \*

*Scientific and Fellowship Contacts Go Hand in Hand.*—As has been so often stated in this column, medical men need not only to know one another in their serious professional work, but also in their social and fellowship relations. Through such social contacts mutual understandings are created which make for better coöperation and more efficient end-results for organized medicine. In other words, these annual meetings make for a stronger California Medical Association and its component county units, and for higher and better standards of practice, and of greater protection to the public health. If an annual session can promote ends such as these, then the meetings of such an annual session certainly are worth attending. Every member who can possibly do so is urged to make an effort to register at this Del Monte session. The reward through such attendance will be more than ample.

#### MODERN HOSPITAL CONSTRUCTION COSTS —THE LOS ANGELES COUNTY GENERAL HOSPITAL AS AN EXAMPLE

*The Estimated Size and Cost of the New "Acute" Unit of the Los Angeles County Hospital.*—In the editorial columns of the last two issues of this journal, mention was made of the new unit of the Los Angeles County Hospital which is now in course of erection and completion, and of its estimated cost, which the press has stated will vary between the stupendous amounts of ten to sixteen millions of dollars!

This new "acute unit"—so-called because intended particularly for indigent citizens suffering from acute diseases or injuries—was planned originally for some 1500 beds, but will have actual provision for some 1911 beds when completed; with possibilities, it has been stated, of accessory crowding—according to the amount of crowding—up to a capacity of 2444 beds, or even up to 3300 to 3600 beds. For the basis of proper calculation or estimate of construction cost per bed, the figure 1911 would probably be the proper one to use, since the term "cost per bed" when properly used implies somewhat definite space, equipment and service standards.

*Why the Attention of California Medical Association Members Is Called to These Construction Costs.*—The attention of members of the California Medical Association is being called to certain aspects of the Los Angeles County General Hospital situation for several reasons.

One, because the members of the California Medical Association have a natural interest in all efforts to provide additional hospital facilities for citizens of California; two, because this hospital building now being built at Los Angeles is probably the most expensive hospital unit thus far erected anywhere in the world; three, because its physical attractiveness and conveniences—as good or better than the great majority of public and private hospitals in the United States and Europe—may be provocative of state medicine propaganda among lay citizens; and four, what may be said to be last but not least, the danger that seems to be lurking in the present atmosphere of things, that before or after this new and very expensive hospital structure is completed and equipped, the medical profession may find itself subjected to criticism or fault-finding by tax-paying lay citizens, for presumably having been in part responsible for what undoubtedly are very high or at least unforetold or unexpected costs of construction; which costs, the airing of which seems to be looming, certain newspapers and tax-paying groups are more than apt to consider as having been extravagant and even wasteful. When taxpayers feel that public moneys have been wasted, newspapers and taxpayers alike usually look for an "official goat." Believing that there is danger that the medical profession may be looked upon as an easy mark for such a doubtful honor, and knowing that it cannot justly be held responsible for mistakes in construction expenditures, it seems proper to establish its record before the storm breaks.

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*How and Why This New Unit Came Into Existence.*—The writer, by virtue of over twenty years' continuous membership and service on a medical advisory board to four different hospital superintendents or medical directors of the Los Angeles County General Hospital, may be presumed to be in a position to know what were the steps preceding the present building program at Los Angeles.

To start with an initial fact or condition, the Los Angeles County Hospital, owing to the rapid growth of population in the county and because no public municipal hospitals existed, has been more or less congested for the last twenty or thirty years.

A half dozen or so years ago, at a time when Mr. Norman R. Martin was superintendent of the institution, the situation became somewhat more acute and was thoroughly discussed; the Advisory Medical Board at that time recommending to the Los Angeles County Board of Supervisors that a bond issue of five million dollars be presented to the voters, this money to be used for the erection of a new unit or buildings for the



county hospital, and for extension of infirmary wards for certain chronic patients at the county farm and for development of the tuberculosis branch facilities. The bond issue was voted, and a contract was made by the board of supervisors with the Allied Architects' Association of Los Angeles for plans and superintendence (this contract was later changed, because the first contract brought into play the principle or right of a corporation to practice the profession of an architect). Much of this five million dollar bond issue was spent on the County Farm, on the Olive View Sanatorium and on other activities, but with what was left the start was made for the new building or buildings of the "Acute Unit" (Unit No. 3) of the county hospital.

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*The Results of the Allied Architects and Medical Board Conferences.*—At that time the medical advisory board of the attending staff of the hospital had frequent meetings with an executive or director group of five from the Allied Architects' Association and after much discussion the basic principles of the new hospital unit were agreed upon.

Included among such decisions were items as follows:

*One.* It was agreed that the present hospital site was the proper place for the new building or buildings, rather than branch county hospitals in Hollywood, Long Beach and other towns, as had been proposed by others.

*Two.* The pavilion system, of which the Cincinnati General Hospital is one of the most recent expressions, was set aside as being undesirable from the standpoint of hospital efficiency and economy. The large office or loft building, in line with modern architectural construction, was decided upon as being best adapted to modern hospital needs.

*Three.* The essential nature of the ward unit which would be represented in all the different wings and different floors was worked out. (That, however, is a story in itself; especially the ineffectual struggle by some members of the medical board to have a simple temporary one-story ward built to try out through actual use, the proposed ward unit which had been decided upon. The story of that unsuccessful effort must abide for its portrayal, for some other occasion than this.)

*Four.* The available free ground in the county hospital area being of low elevation and not well located, the writer urged the medical board to recommend to the board of supervisors the purchase of two city blocks to the rear of the existing acreage. This recommendation was made to and was accepted by the five members of the board of supervisors; and the bungalows thereon and also the hilltop were razed, and the site of the new building located thereon.

*Five.* Efforts were made to have consulting hospital experts placed on retainer, to help guide general and special plans from start to finish. These efforts were only partially successful but

early in the planning, Mr. Chapman of the Mt. Sinai Hospital of Cleveland and the late Doctor Brodrick of Highland Hospital of Oakland, both well known for their extensive knowledge and experience in hospital construction, were engaged and did visit Los Angeles for a week or so, and brought in a report on the general basic plans as these had been outlined in the conferences between the architect group and the advisory medical board. Attempts to have continued coöperation and supervision by these and by other hospital construction experts and consultants such as Doctor Goldwater of New York, failed.

Here, as in the matter of building a one-story try-out ward, the answer which always came back, was "economy." In other words, the money of the taxpayers was to be safeguarded, even though it was many times suggested to the medical board and to other authorities, that these experts would probably save their fee retainers many times over, because of their superior experience and knowledge of hospital construction. One resolution presented to the medical board by the writer and urging such retainer of experts was finally passed but when presented to the board of supervisors by the medical director of the hospital, was accompanied by the medical director's personal recommendation, that the supervisors should not engage such experts. In the light of what has since transpired, it seems more than unfortunate that the valuable knowledge and advice which such experts could have given should not have been constantly at the disposal of those who proceeded with the plans and construction.

*Six.* The general arrangements of the operating rooms, of the wings and floors in which the different professional services in medicine and surgery were to be located, were also worked out in considerable detail in these conferences between the architects' committee and the board.

\* \* \*

*Two Possible Sources of Error.*—The above in brief indicate some of the high points in which the medical profession, through the medical board (which may be said to have represented the attending staff), was involved in the construction of this new unit.

If mistakes were made at that stage, they may be said to have been due in good part to the fact that it was not possible to have expert hospital consultants on retainer, other than in the one brief initial visit already mentioned, and also because it was not possible for certain members of the medical board (the writer being one of such) to persuade the authorities to erect at moderate cost, a try-out ward unit, before going ahead with a building which for a considerable time was thought would not cost much more than the originally estimated five million dollars, but which as time has gone on, has already passed the ten million dollar mark, with a possibility, if newspaper accounts are true, of reaching, exclusive of much equipment, as high as sixteen millions of dollars!

In the matter of this vast amount of money, coming from the pockets of taxpayers, it is proper to state that after the initial bond issue of five million dollars was voted by the citizens, that subsequent money needs for construction costs were met by the yearly placement of a special levy or item in the annual general county tax budget, whereby the moneys needed would be provided. It may be assumed that this method was adopted by the political powers of the county, because in annual tax levies, the taxpayers would notice construction costs far less than they would, had their attention been directly called to the building and its costs through recurrent county hospital bond issues.

\* \* \*

*When the Medical Board "Faded" Out of the Picture.*—The foregoing events practically covered the period into the year 1927.

Then came a lull or interlude, covering virtually the last two years, during which the advisory medical board may be said to have "faded" out of this hospital construction picture, in much the gradual and soft fashion in which, on the silver screen, certain actors are permitted to pass out of a scene when their supposed usefulness, in the minds of the producers or directors, has come to an end.

During this quiescent period of 1928 and 1929 and up to the present the medical board was not called on to continue the previously somewhat frequent conference meetings with the architects, and was obliged to content itself with monthly board meetings at which applications for leaves of absence by staff members and other routine matters were presented.

\* \* \*

*Recent Newspaper Publicity Concerning Hospital Costs.*—About the middle of February of the present year, as noted in last month's editorial in CALIFORNIA AND WESTERN MEDICINE, the newspapers of Los Angeles began to print articles about the very high total costs of the new hospital buildings, stating that some of the bids for completion (exclusive of much of the equipment) indicated that the total cost of such construction, instead of being within a ten or eleven million dollar limit, might approximate something like sixteen million dollars!

In this editorial column of CALIFORNIA AND WESTERN MEDICINE it is not possible to go into details concerning the cost of many construction items (in which members of the medical profession, by virtue of the fact that hospitals are built primarily to make it possible for physicians and surgeons to render more efficient service to lay citizens) have a very natural interest. Two or three phases of construction, however, may be worthy of comment, readers being referred to the Miscellany department of this issue, where, under the caption "Clippings from the Lay Press," excerpts may be found which will give more details on the matters here briefly discussed.

It may be of interest to note that the Los An-

geles newspapers have quoted supervisors as stating that the sum of "\$7,822,055 had either already been expended or obligated by pending contract awards."

Also that

"bids for work, now pending before the county board of supervisors total \$8,686,121."

In the Los Angeles *Times* of March 4 last, Supervisor Shaw was thus quoted:

"We have already paid the architects more than \$600,000."

The Los Angeles *Examiner* of March 4 printed:

"Supervisor Beatty stated that the board of supervisors had invested \$792,967 in the Allied Architects." (For professional services in drawing plans and supervising construction.)

But in an editorial entitled "General Hospital Costs," the Los Angeles *Times* of March 2 stated:

"The incident (the discussion of the supposed total cost of a new hospital unit) has served one good purpose in bringing to public attention the desirability of such expert and disinterested services as are being given the General Hospital project by the board of architects." (!—Exclamation marks are those of the editor.)

Further, in the Los Angeles *Evening Express* of February 25 appeared the following:

"Bids now before the board which Supervisor Graves declared would all probably be rejected tomorrow, follow:

Cement floor finishing.....	\$ 378,030
Doctors' paging equipment.....	413,610
Refrigeration .....	198,997
Lathing and plastering.....	1,430,696
Ornamental metal.....	80,998
Kitchen equipment.....	474,466
Marble and tile.....	1,478,280
Albarene (a form of soapstone containing acid-resisting qualities).....	897,275
Miscellaneous equipment.....	694,482"

\* \* \*

*Above Estimates and Bids on Certain Construction Costs Most Surprising.*—The above are certainly figures of astounding proportions, not the least of the above list being the bid which was submitted on a "paging system for doctors" (the doctors of the attending staff practically being innocent in this matter and knowing little or nothing concerning the elaborate system which seemingly was under consideration for them).

\* \* \*

*Cost of the Paging System in the Alameda County Hospital.*—When one remembers that in the comparatively new Alameda County Hospital of four hundred beds, designed by the late Doctor Brodrick, the Holzer-Cabot paging system was installed at a cost of "eleven thousand dollars, and we were given to understand that after installing initial parts of the system, units would be cheaper in proportion" (quotation from a personal letter from Doctor Hamlin of Oakland, who gave gratuitous service as superintendent for two years or so) one must necessarily be somewhat bewildered at the bid of \$413,610 which was offered on the equipment of a doctors' paging system for this new building which is being erected for the Los Angeles



County Hospital. It may be taken for granted that in any later criticisms by the public press of such an expenditure that the majority of lay fellow citizens and taxpayers would probably feel that the said expenditure was brought about largely through request or demand of the attending physicians. Yet such an imputation would be most unfair.

\* \* \*

*Further References to This Subject in the Miscellany Department of This Issue.*—Readers of CALIFORNIA AND WESTERN MEDICINE who are interested in these construction costs of a new hospital building to care for some of the sick poor of Los Angeles County may find further items in the quotations from the lay press which are printed in the Miscellany department of this issue.\* A perusal of the same will indicate why the editor closed last month's editorial in CALIFORNIA AND WESTERN MEDICINE with the following words:

"We must all agree that it will be most interesting to note the different influences and effects which this large public hospital, now in course of construction for the care of indigent citizens of Los Angeles County, will have on the lay public, and on private medical practice, both in and beyond the geographical domain of that county."

#### WILLIAM TAYLOR McARTHUR

1866-1930

Death has again taken from our midst one of the ex-presidents of the California Medical Association. Our genial colleague, William Taylor McArthur of Los Angeles, who was president of our state medical association in 1927, was called from his earthly work on March 11, 1930. For several years, in fact even during his term as president of the California Medical Association, Doctor McArthur, because of poor health, had found it necessary to safeguard and conserve his energy, but this fact, known to his friends, he quietly kept from others.

Doctor McArthur was an excellent type of the true physician—able, gentle, kind, generous and thoughtful; and possessing in addition to all these virtues, a charming and lovable personality that endeared him to all who had the good fortune to meet and to know him, whether in the relationship of patient, colleague, neighbor, friend or fellow citizen. His was a life of quiet, unostentatious uplift. The world and the medical profession are the better for his having lived. *Requiescat in pace.*

#### BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA—ITS REPORT

*State Examining Board Now a Division of the Department of Professional and Vocational Standards.*—The first annual report of the California Board of Medical Examiners to be brought out since its existence as a division of the Department of Professional and Vocational Standards has just come off the press.

It contains much information worthy of consideration by all members of the medical profes-

sion who believe in accepting their share of responsibility in the maintenance of proper professional standards for practitioners of the healing art. An inspection of the pages of this report indicates how many and difficult are the problems which must be solved by the colleagues who accept service as members of this board.

In the memories of older members of the California Medical Association are recollections of controversies which were centered around our state examining board, and which at times were carried on with much fierceness. In recent years the work of the board of examiners has gone forward so smoothly that a goodly number of members of the California Medical Association almost forget its existence, while others are prone to think that because of the absence of newspaper publicity it must be side-stepping its responsibilities. Such is not the case however. It may be said that our examining board has never rendered more efficient or conscientious service than in recent years, and its members deserve and have the thanks of the medical profession for their loyal and altruistic efforts to maintain proper standards and to carry out the various provisions of the state medical practice act which have been provided to better safeguard the public health.

\* \* \*

*Why Should Not This Annual Report Be Printed as a Part of the Yearly Directory?*—Members of the California Medical Association who are interested should write to the California Board of Medical Examiners, 623 State Building, San Francisco, and request a copy of this report. Which suggests the thought that inasmuch as every California physician must pay an annual licensure tax, that this annual report might well be printed in next year's annual directory, a copy of which directory is sent to every licensed physician. The members of the medical profession are not only entitled, but should know what are the activities and problems of this examining board; and since that board is supported not by funds from general taxation sources but by a special levy on members of the profession, no legitimate objection should be raised to such use of printers' ink by either the director of professional and vocational standards, or by any other state executive or executives. If such objection is raised because of presumable legal obstacles, then a proper enabling act should be submitted to the next legislature. In an effort of this kind, the proper officers of the California Medical Association would no doubt be glad to cooperate.

\* \* \*

*Excerpts from the Report Printed in This Issue.*—In the California Board of Medical Examiners column in this issue are printed some excerpts which indicate how worth while this information is and especially so if the annual report of the board could reach every physician as a part of his yearly directory. It is hoped that the Board of Medical Examiners will see fit to consider, and if possible to adopt the suggestions here made.

\* See page 298 of this issue.

# MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

## Allergy

**A** Definition.—That great confusion exists in regard to the use of the term “allergy” is shown by the fact that the editors of the new *Journal of Allergy*, the first number of which appeared in November 1929, have felt it necessary to define the sense in which the term is used in the title of their journal. When von Pirquet and Schick<sup>1</sup> coined the word “allergy” (*allos*, “altered”; *ergia*, “reactivity”), they had in mind the use of a comprehensive term to cover various manifestations of hypersensitiveness observed in human beings, but more especially the altered reactions in man, giving rise to a more rapid appearance of the symptoms of serum disease following a second injection of horse serum. Until comparatively recent years, the term has been employed interchangeably with anaphylaxis, such phenomena as serum disease, asthma, hay fever and food and drug idiosyncrasies being referred to as allergic or anaphylactic manifestations of disease. Indeed so loose had become its employment that allergy, as a descriptive designation of a pathologic state, ceased to possess an established meaning in scientific usage.

The editors of the *Journal of Allergy* define the term as a condition of “specific hypersensitiveness exclusive of anaphylaxis in lower animals.” To the physician who has not followed the recent clinical and immunologic studies of this subject, the reasons for such a definition may not be obvious, and may require further elaboration.

That the type of hypersensitiveness which appears spontaneously in human beings (asthma, hay fever, and certain urticarias and eczemas) is remarkably similar to experimental anaphylaxis in animals was early recognized,<sup>2,3</sup> but the evidence that the two phenomena have fundamental differences has come only from recent immunologic studies.

The term “anaphylaxis” has come to have a special meaning and should be restricted to the condition of induced hypersensitiveness produced in animals by definitely antigenic substances. The mechanism of anaphylactic shock always implies the interaction of a specific antibody-antigen combination. The anaphylactic antibodies are precipitins. The idea that the phenomena now designated as allergic are also the result of an antibody-antigen reaction originated in the theory of von Pirquet and Schick regarding serum allergy, a view which, in point of time, actually preceded the discovery of the mechanism of anaphylaxis. Subsequent immunologic studies have shown, how-

ever, that anaphylactic antibodies are not present in the conditions usually classified under allergy, namely, the asthma-hay fever-eczema group, certain food and drug idiosyncrasies, serum disease and tuberculin hypersensitiveness. Immunologically these conditions are characterized by the presence in the blood of some of them of a skin-sensitizing antibody designated by some workers as *allergen*<sup>4</sup> and by others as reagin.<sup>5</sup> This mediating, blood-borne body is not a true antibody in the sense that it is not produced under the stimulation of an antigen. By immunologic criteria, therefore, allergy and anaphylaxis are very distinct phenomena.

Of the allergic conditions observed in man, asthma, hay fever and certain eczemas are strictly subject to hereditary influences, while others, serum disease, the tuberculin type of bacterial allergy and dermatitis venenata are not. To the first group of allergic diseases Coca<sup>6</sup> has given the designation “atopy” (atopia, “a strange disease”). The propriety of classifying as allergic, idiosyncrasy to substances of definite chemical nature, such as drugs or the little understood hypersensitiveness of the individual to other forms of bacterial protein is still a moot question.

Finally, the definition of allergy and its importance in the etiology of disease will be much clarified by adopting, whenever possible, the postulates of Cooke<sup>7</sup> before assuming or proving that any protein or other chemical substance is a causative factor in a case of hypersensitiveness. In brief these are: first, a history of contact by the individual in some way with the suspected substance in order to permit it to act as an etiologic factor; second, the demonstration of sensitization by a positive local reaction, cutaneous, intradermal or ophthalmic; and third, the reproduction at will of the original allergic manifestation on introduction of the substance, either by inhalation, ingestion, or subcutaneous injection.

SAMUEL H. HURWITZ,  
San Francisco.

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5. Coca, A. F.: *Essentials of Immunology for Medical Students*. The Williams and Williams Company, Baltimore, 1925, p. 74.



6. Coca, A. F., and Cooke, A. R.: *J. Immunol.*, 1923, 8, 163.

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### Syphilology\*

**Nitritoid Reactions, Immediate and Delayed—A Technique Reducing the Repeated Use of Control Methods.**—A variety of techniques for the control of immediate and delayed nitritoid reactions following the administration of arsphenamin or its derivatives has long been available and well known to all syphilologists. The Bezredka, the injection of atropin sulphate subcutaneously and their combinations and modifications are methods in common use by all of us. The application of these methods in an institution or private practice is frequently a source of time consumption for both the patient and physician, and although extremely practical, represents a technical obstacle which could be agreeably dispensed with. It seems unnecessary in this report to enter into a discussion of such methods, for the literature contains many references which are of unusual interest and bring the subject up to date. It is my desire at this time merely to offer a method which, in our hands, has proved of value. In dealing with a large group of patients, time-consuming treatment is at times a difficult problem. Experiments, therefore, were conducted in an effort to eliminate this elaborate method and to make possible a return of the patient to the usual routine methods of treatment without evidence of reaction.

In a few instances we observed that patients regularly receiving the Bezredka technique did not act unfavorably when such technique was accidentally omitted during the course of treatment. This observation led to a systematic attempt to determine the possibility of gradually "desensitizing" (if such a term could be used) all patients under treatment with the modified Bezredka technique. The method which has been in use in this hospital could well be termed "a modified Bezredka technique," for the principles of that technique are here embodied in combination with the subcutaneous injection of atropin sulphate, after the method described by Stokes. The Bezredka technique largely consists of time intervals between an injection of one-tenth of the total dose of arsphenamin or its derivatives, and a second injection of the remainder of the total dose. Stokes advised the use of the subcutaneous injection of atropin sulphate preceding the first injection of arsphenamin or its derivatives by twenty minutes. The method here offered is based upon a gradual diminution of those time intervals, and also of the amounts of atropin sulphate, as well as an increase in the amount of the arsphenamin or its derivatives

given at the first injection until the time intervals and the atropin sulphate injections are eliminated and the entire dose of the arsphenamin or its derivatives is given at one time. We found that patients reacting to such drugs could readily be placed on such a "cut down" method, and after their sixth treatment tolerated the injection of the arsphenamin or its derivatives in full dosage at one time. The first treatment given a patient placed upon a modified Bezredka technique consists of the subcutaneous injection of atropin sulphate in doses of 1/150 grain to 1/75 grain, depending upon the body weight, and precedes the first injection of the arsphenamin or its derivatives by twenty minutes. The first injection of the latter consists of one-tenth of the total dose, which likewise is dependent upon body weight. A second time interval of twenty minutes is allowed between this injection and the last injection of the arsphenamin or its derivatives. The latter consists of the remainder of the total dose, and is given at one time. This technique is efficient in controlling reactions by both the intravenous and intramuscular routes of administration. While using the technique described by Stokes for the control of nitritoid reactions following intramuscular medication, we found that the placing of the second injection of the drug in exactly the site of the first is unnecessary. Results are the same, without regard to which buttock receives the second injection. The "cut down" method resolves itself into the giving of six treatments at weekly intervals, with the factors noted above so arranged as to eliminate them by the seventh injection. The time intervals are diminished after the following fashion. At the first treatment the interval is twenty minutes; the second, fifteen minutes; the third and fourth, ten minutes; the fifth and sixth, five minutes. The injections of atropin sulphate are diminished from 1/75 grain for the first, second and third treatments to 1/150 grain for the fourth, fifth and sixth treatments. The first arsphenamin injection is increased from one-tenth of the total dose for the first and second treatments to one-fourth for the third and fourth, and one-half for the fifth and sixth. By the seventh treatment the patient is able to receive the entire dose of the arsphenamin or its derivatives without preparation, and can continue from then on in a normal and routine fashion.

A total of twenty-five cases giving evidence of nitritoid reactions, either immediate or delayed, have been observed for a period of time sufficient to render them reactionless by the method described above. Eight of these cases were "cut down" in four treatments, but three of them developed reactions upon the institution of routine methods. The remainder, or seventeen cases, were carried through the sixth treatment, and thereafter failed to develop reactions.

STANLEY O. CHAMBERS,  
Los Angeles.

\* From the Los Angeles General Hospital.

## Tuberculosis

**Points on the Value, Safety, and Methods of Giving B. C. G. for Protective Immunization Against Tuberculosis.**—Few topics in the field of tuberculosis have assumed so much prominence as the present discussion on the value and safety of Professor Calmette's prophylactic immunization method against tuberculosis.

The B. C. G. vaccine is the discovery or the production of Professor Calmette, the assistant director of the Pasteur Institute in Paris, and his coworker Guérin, a veterinary surgeon. The *Bacillus* of Calmette and Guérin is abbreviated "B. C. G." It consists of living, slightly virulent tubercle bacilli of the bovine type, having been attenuated by being cultured on an ox-bile-glycerin medium for the past twenty-one years.

It is pointed out that from 35 to 90 per cent of children reaching the age of puberty react to tuberculin, and that infants are born with no appreciable resistance to the infection. In many instances, contact with tubercle bacilli leads to progressive disease, ending with an infection large and severe enough to produce death. On the other hand, apparently, if the infant comes in contact with only a few microorganisms and at infrequent intervals, it escapes serious consequences. The latter type of case has apparently been successfully immunized against tuberculosis, due to the fact that he has never been overwhelmed with a host of virulent organisms.

According to Calmette, an infection of mild nature is very desirable. The excessive infections must be avoided and the intervals of periodic implantation well regulated. The microorganism used for producing mild infection should be of low virulence. Calmette is supported by a large following in his belief that the attenuated B. C. G., properly used, is capable of producing this desired immunity. Believing that most of the infections in children take place by the digestive route for the reason that the intestinal mucosa of the infant during the first ten days of life absorbs the microorganisms much more readily than at any other later period, Calmette's vaccinations have been carried on in most cases by feeding the microorganisms to newborn babies. Some were vaccinated by the subcutaneous or the intracutaneous route.

In his series of cases, Calmette claims that not a single fatality has occurred in infants vaccinated with B. C. G. In some earlier publications, he claimed that no tuberculous changes were produced by the vaccination of guinea-pigs. In later publications, however, he admits that tuberculous lesions can be set up, but he adds that in due time the lesions heal completely. He states that no matter what method of inoculation was used, progressive tuberculosis was never produced by the living B. C. G.

On the other hand, a number of cases have been reported by other men in which death from tuberculosis occurred following vaccination, and the deaths have been attributed to infection by the B. C. G. Petroff reports that apparently the bacilli of tuberculosis may assume two forms.

In one form they are comparatively harmless, whereas the other form may be very virulent. This difference may account for the unsatisfactory results which have been reported. A vaccine made from what was supposed to be the harmless tubercle bacilli would have an unfortunate effect on the subject vaccinated if the bacilli suddenly changed to the virulent form.

Kereszturi and Park, in reporting upon their experience with B. C. G., state that one death occurred in a baby whose mother died of miliary tuberculosis soon after the birth of the child, and it was thought that the child may have picked up a blood-stream infection through the placenta.

In general it is found that oral B. C. G. vaccination is relatively simple, quite harmless, and gives some immunity. Due to the facts that the dosage of the vaccine by the oral route cannot be controlled very well and that the oral administration is good only in the newborn, it is believed that the subcutaneous or the intracutaneous injection of the B. C. G. should be superior to the oral method.

Keeping in mind the merits of this treatment and recognizing that it is not foolproof, a safe course should be followed by using the vaccine with extreme care and considering that indiscriminate use of the B. C. G. is probably not justifiable at the present time.

W. E. MACPHERSON,  
Loma Linda.

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University of California Hospital to Adopt Most Modern X-Ray Film Storage.—In order to further perfect methods of storing x-ray film and to make its x-ray rooms and storage vaults as safe and as modern in equipment as any in the country, the University of California Hospital has prepared plans for additions and changes to cost \$7500.

In making known this program recently, Director Lionel S. Schmitt stated that the National Board of Fire Underwriters has given its unqualified approval of the plans, and that they have been submitted to the San Francisco fire department officials as well.

The University Hospital already maintains a separate underground vault outside of the hospital building proper, the effectiveness of which was proven during the fire of a few months ago. But the additional changes will not only add further safeguards to this vault, but will make it impossible for fires to occur in the x-ray viewing room as was the case this winter.

First of all the concrete walls of the vault will be reinforced with additional layers of fireproof material, and the stored films will be placed in small steel containers on steel racks. Over the top of these racks will be an automatic deluge water system so designed that a sudden rise in the room temperature, about fifteen degrees in a minute, will set them going and promptly flood the room.

Double fireproof doors will be installed, one operated by an automatic check and the other connected with the sprinkler system in such a way that simultaneous to the starting of the sprinklers, the door, if not already closed, is thrust shut.

In addition to these changes in the design of the vault itself, the hospital has adopted a noninflammable film for all future x-ray photography, which will prevent ignition of film in viewing machines. Finally, a limit has been set on the length of storage of inflammable film now being kept for record. Each year the oldest films will be sorted out and thrown away; so that soon, even within the fireproof vault, there will be no inflammable film kept.—*U. C. Clip Sheet.*



# Program

THE FIFTY-NINTH ANNUAL SESSION

of the

CALIFORNIA MEDICAL ASSOCIATION

To be held at

DEL MONTE, CALIFORNIA, APRIL 28-MAY 1, 1930

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#### Alternates

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#### Committee on Medical Education and Medical Institutions

George Dock (Chairman), Pasadena.....1932  
H. A. L. Ryfkogel, San Francisco.....1931  
George G. Hunter, Los Angeles.....1930

#### Committee on Medical Defense

George G. Reinle (Chairman), Oakland.....1932  
J. L. Maupin, Sr., Fresno.....1931  
Mott H. Arnold, San Diego.....1930

#### Committee on Membership and Organization

Harlan Shoemaker, Los Angeles.....1932  
LeRoy Brooks (Chairman), San Francisco.....1931  
Jesse W. Barnes, Stockton.....1930  
The Secretary.....Ex-officio

#### Committee on History and Obituaries

Charles D. Ball (Chairman), Santa Ana.....1932  
Percy T. Phillips, Santa Cruz.....1931  
Emmet Rixford, San Francisco.....1930  
The Secretary.....Ex-officio  
The Editor.....Ex-officio

#### Committee on Publications

Alfred C. Reed, San Francisco.....1932  
Percy T. Magan (Chairman), Los Angeles.....1931  
Frederick F. Gundrum, Sacramento.....1930  
The Secretary.....Ex-officio  
The Editor.....Ex-officio

#### Committee on Public Policy and Legislation

Junius B. Harris (Chairman), Sacramento.....1932  
William Duffield, Los Angeles.....1931  
Joseph Catton, San Francisco.....1930  
The President.....Ex-officio  
The President-Elect.....Ex-officio

### COMMITTEE ON SCIENTIFIC PROGRAM

#### Emma W. Pope, Chairman

Karl L. Schaupp (1932)	Ernest H. Falconer (1930)
San Francisco	San Francisco
Lemuel P. Adams (1931)	Sumner Everingham (1930)
Oakland	Oakland

#### Robert V. Day (1930) Los Angeles

### COMMITTEE ON ARRANGEMENTS

#### T. Henshaw Kelly, Chairman

Joseph Catton	William H. Bingaman
San Francisco	Salinas
William M. Gratiot	Alfred Phillips
Monterey	Santa Cruz
Garth Parker	The Secretary
Salinas	Ex-officio

\* Deceased.



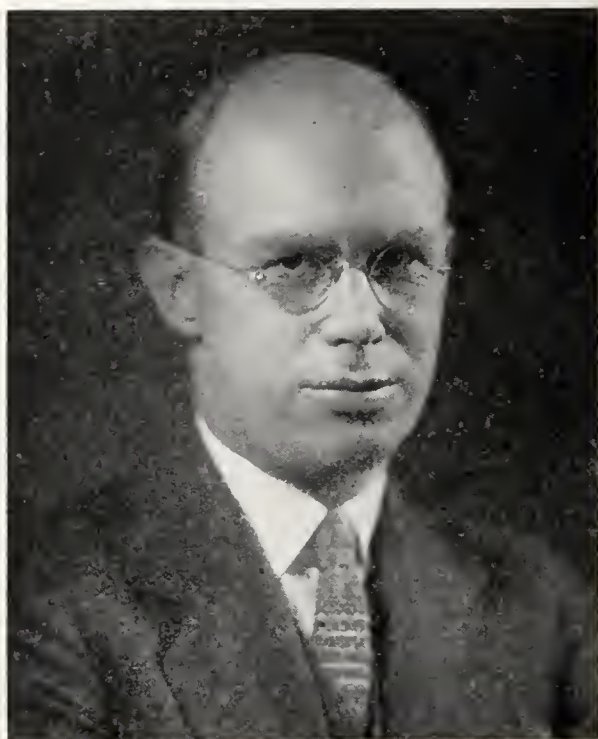
FRED D. WEIDMAN, M. D.  
Professor of Dermatology, University of  
Pennsylvania



McKIM MARRIOTT, M. D.  
Dean and Professor of Pediatrics, Washington  
University, St. Louis



A. U. DESJARDINS, M. D.  
Assistant Professor of Radiology  
Mayo Clinic



GEORGE M. CURTIS, M. D.  
Associate Professor of Surgery  
The University of Chicago

Guest Speakers at the 59th Annual Session, California Medical Association



1930 HOUSE OF DELEGATES

Membership

OFFICERS (Ex-officio Members)

Morton R. Gibbons, San Francisco.....President  
Lyell C. Kinney, San Diego.....President-Elect  
Edward M. Pallette, Los Angeles.....  
.....Speaker of House of Delegates  
John H. Graves, San Francisco.....  
.....Vice-Speaker of House of Delegates  
Secretary-Treasurer and Editors

Councilors

Mott H. Arnold, San Diego (1932).....First District  
William Duffield, Los Angeles (1930).....Second District  
Gayle G. Moseley, Redlands (1931).....Third District  
Fred R. De Lappe, Modesto (1932).....Fourth District  
Alfred L. Phillips, Santa Cruz (1930).....Fifth District  
Walter B. Coffey, San Francisco (1931).....Sixth District  
Oliver D. Hamlin, Oakland (1932).....Seventh District  
Junius B. Harris, Sacramento (1930).....Eighth District  
Henry S. Rogers, Petaluma (1931).....Ninth District  
George G. Hunter, Los Angeles (1932).....At Large  
Ruggles A. Cushman, Santa Ana (1930).....At Large  
George H. Kress, Los Angeles (1931).....At Large  
Joseph Catton, San Francisco (1932).....At Large  
T. Henshaw Kelly, San Francisco (1930).....At Large  
Robert A. Peers, Colfax (1931).....At Large

DELEGATES

ALTERNATES

Alameda County (9)  
L. P. Adams  
Chesley Bush  
Daniel Crosby  
C. A. Dukes  
E. N. Ewer  
R. A. Glenn  
Gertrude Moore  
G. G. Reinle  
W. H. Irwin  
C. L. Abbott  
F. S. Baxter  
W. G. Donald  
J. A. Dougherty  
W. F. Holcomb  
S. A. Jelte  
T. C. Lawson  
George McClure  
Hobart Rogers  
Butte County (1)  
J. O. Chiapella  
Contra Costa County (1)  
U. S. Abbott  
J. F. Feldman  
Fresno County (3)  
D. I. Aller  
C. O. Mitchell  
C. D. Collins  
A. E. Anderson  
W. F. Stein  
C. M. Vanderburgh  
Glenn County (1)  
Etta Lund  
Humboldt County (1)  
Orris Myers  
Charles C. Falk  
Imperial County (1)  
Eugene Le Baron  
W. W. Apple  
Kern County (1)  
F. J. Gundry  
J. M. Kirby  
Lassen-Plumas County (1)  
G. R. Fortson  
Dan Coll  
Los Angeles County (36)  
Walter Bayley  
W. B. Bowman  
Harry V. Brown  
Katherine Close  
Foster K. Collins  
D. M. Ghrist  
F. C. E. Mattison  
\*W. T. McArthur  
James F. Percy  
F. M. Pottenger  
B. O. Raulston  
John C. Ruddock  
F. B. Settle  
Eleanor C. Seymour  
Leroy B. Sherry  
R. G. Taylor  
Packard Thurber  
S. M. Alter  
John V. Barrow  
Walter P. Bliss  
R. S. Cummings  
Robert V. Day  
George Dock  
Walter L. Huggins  
William W. Hutchinson  
Louis Josephs  
W. H. Kiger  
Joseph M. King  
Percy T. Magan  
William R. Molony  
C. E. Phillips  
C. W. Rand  
Harlan Shoemaker  
Henry Snure  
C. G. Toland  
B. Von Wedelstaedt  
Ralph Byrnes  
Montague Cleeves  
R. M. Dodsworth  
Scott D. Gleeten  
Joseph Goldstein  
G. D. Maner  
Wallace J. Miller  
E. J. Moffitt  
William J. Norris  
R. E. Ramsay  
A. M. Rogers  
W. T. Rothwell  
A. J. Scott  
C. G. Stadfield  
Philip Stephens  
W. B. Thompson  
H. G. Westphal  
R. W. Wilcox  
Harold Witherbee  
I. R. Bancroft  
Fred B. Clarke  
Carl R. Howson  
John C. Irwin  
H. G. Levengood  
T. C. Lyster  
H. G. McNeil  
R. P. McReynolds  
A. J. Murrieta  
Thomas C. Myers  
John P. Nuttall  
S. N. Pierce  
J. E. Pottenger  
Albert Soiland  
J. K. Swindt  
H. B. Tebbetts  
Neal N. Wood

DELEGATES

ALTERNATES

Marin County (1)  
Frank M. Cannon  
John H. Kuser  
Mendocino County (1)  
Royal Scudder  
L. K. Van Allen  
Merced County (1)  
H. Kylberg  
J. L. Mudd  
Monterey County (1)  
W. H. Bingaman  
C. H. Lowell  
Napa County (1)  
H. R. Coleman  
George I. Dawson  
Orange County (2)  
Dexter R. Ball  
Harry E. Zaiser  
George M. Tralle  
William S. Wallace  
Placer County (1)  
C. Conrad Briner  
Carl P. Jones  
Riverside County (1)  
Thomas A. Card  
William R. Dorr  
Sacramento County (3)  
W. H. Pope  
Hans F. Schluter  
E. W. Beach  
G. Parker Dillon  
W. K. Lindsay  
San Benito County (1)  
R. L. Hull  
E. E. McKay  
San Bernardino County (3)  
F. F. Abbott  
W. F. Pritchard  
S. B. Richards  
A. T. Gage  
San Diego County (5)  
F. L. Macpherson  
T. O. Burger  
C. E. Rees  
B. J. O'Neill  
W. H. Geistweit, Jr.  
A. J. Thornton  
George B. Worthington  
L. W. Zochert  
E. S. Coburn  
L. H. Redelings  
San Francisco County (19)  
Philip H. Arnot  
Elbridge J. Best  
Walter W. Boardman  
LeRoy Brooks  
Harold Brunn  
Edward C. Bull  
William E. Chamberlain  
Howard W. Fleming  
Henry W. Gibbons  
Alexander S. Keenan  
William J. Kerr  
Alson R. Kilgore  
Eugene S. Kilgore  
Langley Porter  
George K. Rhodes  
Henry A. L. Ryfkogel  
Karl L. Schaupp  
William E. Stevens  
John H. Woolsey  
Edwin L. Bruck  
C. Latimer Callander  
William R. P. Clark  
Elizabeth A. Davis  
Louise B. Deal  
William Dock  
Randolph G. Flood  
Mary E. Glover  
Irving S. Ingber  
Albert E. Larsen  
Robert C. Martin  
Stanley H. Mentzer  
Lewis Michelson  
Kaspar Pischel  
I. Walton Thorne  
Edward Topham  
Edward B. Towne  
William C. Voorsanger  
Rodney A. Yoell  
San Joaquin County (2)  
J. W. Barnes  
B. J. Powell  
R. T. McGurk  
C. V. Thompson  
San Luis Obispo County (1)  
Gifford L. Sobey  
G. J. Teass  
San Mateo County (1)  
Edward F. Ziegelman  
William H. Murphy  
Santa Barbara County (2)  
Henry J. Ullmann  
Hugh F. Freidell  
William J. Mellinger  
William H. Eaton  
Santa Clara County (3)  
Edwin M. Miller  
A. A. Shufelt  
A. H. MacFarlane  
C. K. Canelo  
H. E. Dahleen  
J. H. Kirk  
Santa Cruz County (1)  
L. Liles  
P. T. Phillips  
Shasta County (1)  
Ferdinand Stabel  
Earnest Dozier  
Siskiyou County (1)  
C. C. Dickinson  
Charles Pius  
Solano County (1)  
Ream S. Leachman  
J. Edward Hughes  
Sonoma County (1)  
J. Walter Seawell  
Stewart Z. Peoples  
Stanislaus County (1)  
J. W. Morgan  
R. E. Maxwell  
Tehama County (1)  
Frank J. Bailey  
Frank L. Doane  
Tulare County (1)  
G. B. Furness  
H. G. Campbell  
Tuolumne County (1)  
Homer D. Rose  
William L. Hood  
Ventura County (1)  
Louis W. Achenbach  
John W. Bardill  
Yolo-Colusa County (1)  
Fred R. Fairchild  
J. E. Harbinson\*  
Yuba-Sutter County (1)  
P. B. Hoffman  
F. W. Didier

\* Deceased.

## HOUSE OF DELEGATES MEETINGS

### FIRST MEETING PROGRAM

Copper Cup Room, Hotel Del Monte, Monday,  
April 28, 8 p. m.

Open to Members of the California Medical Association

#### ORDER OF BUSINESS

1. Call to order.
2. Report of Credentials Committee and roll call.
3. Report of President Morton R. Gibbons.
4. Appointment of the two Reference Committees and the Credential Committee by the Speaker of the House of Delegates.
5. Report of the Council, Oliver D. Hamlin, Chairman.
6. Report of the Committee on Scientific Program, Emma W. Pope, Chairman.
7. Report of the Auditing Committee, T. Henshaw Kelly, Chairman.
8. Report of the Secretary, Emma W. Pope.
9. Report of the Editors, George H. Kress, Emma W. Pope.
10. Report of the General Counsel, Hartley F. Peart.
11. Unfinished business.
12. New business. (Introduction of resolutions.)
13. Reading and adoption of minutes.  
Adjournment.

### SECOND MEETING PROGRAM

Copper Cup Room, Hotel Del Monte, Wednesday,  
April 30, 8 p. m.

Open to Members of the California Medical Association

#### ORDER OF BUSINESS

1. Call to order.
2. Roll call.

3. Announcement of the place of session, 1931.

4. Election of:

- (a) President-elect.
- (b) Speaker of House of Delegates.
- (c) Vice-speaker of House of Delegates.
- (d) Councilors.

Second District—Incumbent, William Duffield, Los Angeles (1930).

Fifth District—Incumbent, Alfred L. Phillips, Santa Cruz (1930).

Eighth District—Incumbent, Junius B. Harris, Sacramento (1930).

Councilors-at-Large—Incumbent:

Ruggles A. Cushman, Santa Ana (1930).

T. Henshaw Kelly, San Francisco (1930).

- (e) Delegates and alternates to American Medical Association for sessions, 1931-1932.

Incumbents:

Delegates

Victor Vecki  
San Francisco

Percy T. Magan  
Los Angeles

Junius B. Harris  
Sacramento

Alternates

William E. Stevens  
San Francisco

Charles D. Lockwood  
Pasadena

John Hunt Shephard  
San Jose

- (f) Program Committee:

Incumbent—Robert V. Day, Los Angeles.

5. Report of Reference Committee on Reports of Officers and Standing Committees.

6. Report of the Reference Committee on Resolutions and New Business.

7. Presentation of President.

8. Presentation of President-elect.

9. Reading and adoption of minutes.  
Adjournment.

## GENERAL INFORMATION\*

**Registration and Information.**—The registration and information desk is located in the lobby, Hotel del Monte. All persons attending the convention, whether members or not, are requested to register immediately on arrival. Beginning Monday, April 28, registration secretaries will be on duty daily from 9 a. m. until 5 p. m.

**Guests and Visitors.**—All guests and visitors are requested to register. All general meetings and scientific meetings are open to visitors and guests.

**Badges.**—Four kinds of badges will be issued by the registration bureau:

1. Members.—Only active, associate, retired or honorary members of the California Medical Association will be issued the usual membership badge. Members must show membership cards when they register.

2. Guest.—A special badge will be issued to all fraternal delegates, visiting physicians, wives of members, and technical specialists who are attending the 1930 session.

3. Delegates and Alternates.—The usual official badge is provided for this purpose, and will be issued only to persons authorized to wear it.

4. Councilors.—An official badge is provided for all officers and members of the Council.

**Membership Cards.**—Every member in good standing in the California Medical Association has been issued an official membership card for 1930. Present membership card at registration desk.

**Suggestions and Constructive Criticism.**—The officers and committees have tried to do everything possible to make the session a success. Suggestions and constructive criticism calculated to make future sessions more useful will be welcomed by any of the officers. Complaints of whatever character should be made to the registration desk, where they will receive attention.

**Social Program.**—The social program is in the hands of the Arrangements Committee, and is published at the end of this program.

**Press Representatives.**—Accredited press representatives are welcome, and they will be accorded every possible courtesy.

**Publicity.**—All publicity is in the hands of a Publicity Committee. It is requested that all persons having matter of "news" value report it to this committee. It is particularly requested that all "news" about any phase of the convention be given out through the official committee, and in no other way.

\* See page 283 for entertainment program, golf tournament, etc.

**Exhibits.**—Only advertisers in California and Western Medicine are permitted to exhibit at the annual session.

**Rules Regarding Papers and Discussions at the State Meeting.**—Upon recommendation of the Executive Committee, the following rules regarding papers have been adopted by the Council:

1. All papers read before a section of an annual session are the property of California and Western Medicine.

2. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.

3. The maximum time permitted any individual to discuss a paper is four minutes. This also applies to the author in closing his discussion. No speaker may discuss more than once any one subject.

4. A copy of each and every paper presented at the state meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

5. All papers read at the annual meeting shall be published in full in California and Western Medicine as soon after the meeting as space will permit. At the option of the author and editor, an abstract of the paper of about one column in length may be published as soon as possible after the meeting with reprints in full of the entire paper (the cost of setting up type for the reprint to be borne by the Association, and all other costs to be borne by the author).

6. Articles are accepted for publication on condition that they are contributed **solely** to California and Western Medicine. Authors desiring to publish their papers elsewhere than in the journal may have their manuscripts returned to them upon written request to the state secretary.

7. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed fifty words.

8. Papers shall not be "read by title."

9. No member may present more than one paper at any state meeting, provided that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

10. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Executive Committee his inability to fulfill his obligation.





LORRULI RETHWILM  
Chairman Anesthesiology  
Section



SAMUEL AYRES, JR.  
Chairman Dermatology and  
Syphilology Section



BARTON J. POWELL  
Chairman Eye, Ear Nose, and  
Throat Section



WALTER P. BLISS  
Chairman General Medicine  
Section



CLARENCE G. TOLAND  
Chairman General Surgery  
Section



CHARLES A. DUKES  
Chairman Industrial Medicine  
and Surgery Section

SCIENTIFIC EXHIBIT

A Scientific Exhibit of gross and microscopic specimens, illustrating the Mycoses, will be demonstrated in the corridor adjacent to the Club Room, together with roentgenologic pictures and charts, and gross specimens illustrating various interesting phases of pathology. Exhibit will be personally demonstrated.

General Outline of Various Meetings and Entertainment					
	9-11:30 a. m.	11:30-1 p. m.	1-2:30 p. m.	2:30-5 p. m.	8 p. m.
Sunday				Council, Room 722, 2 p.m.	Council, Room 722
Monday	Golf Del Monte Links	Golf	General Meeting	Section Meetings Council, Room 722	House of Delegates Copper Cup Informal Dance Auditorium
Tuesday	Section Meetings. Council Room 722	General Meeting	Pathology Section Luncheon	Golf at Del Monte Seventeen-mile Drive	7 p. m. President's Dinner Dance
Wednesday	Section Meetings. Council Room 722	General Meeting	Pathology Section Luncheon Pediatric Section Luncheon	Golf at Pebble Beach Links 4 p. m. Tea for Ladies Monterey Peninsula Country Club	House of Delegates Copper Cup Bridge and Informal Dance
Thursday	Section Meetings. Council Room 722				



THOMAS G. INMAN  
Chairman Neuropsychiatry  
Section



KARL L. SCHAUPP  
Chairman Obstetrics and  
Gynecology Section



W. T. CUMMINS  
Chairman Pathology and  
Bacteriology Section



GUY L. BLISS  
Chairman Pediatrics Section



CHARLES P. MATHÉ  
Chairman Urology Section

MEETINGS, DINNERS, AND LUNCHEONS

Meetings of the House of Delegates.—Monday and Wednesday evenings, April 28 and 30, at 8 p. m. in Copper Cup Room, Hotel Del Monte.

Council Meetings—Room 722:

- First meeting, Sunday, April 27, 2 p. m.
- Second meeting, Sunday, April 27, 8 p. m.
- Third meeting, Monday, 2:30 p. m.
- Fourth meeting, Tuesday, 9 a. m.
- Fifth meeting, Wednesday, 9 a. m.
- Sixth meeting, Thursday, 9 a. m.

General Meetings.—The public is invited to attend all general meetings:  
Monday, 1 to 2:30 p. m.—Presidential addresses, Auditorium.

Tuesday, 11:30 a. m. to 1 p. m.—Addresses, by invited guests, Auditorium.

Wednesday, 11:30 a. m. to 1 p. m.—Addresses, by invited guests, Auditorium.

Organization Meetings of All Standing Committees.—Members of all Standing Committees should meet in the

Lounge early on Thursday morning to organize for the coming year by the election of a chairman and secretary, and appointment of advisory members—and to discuss plans for the following year's work.

Dinners

President's Dinner Dance.—Tuesday evening, dining room and ballroom, Hotel Del Monte, 7 p. m. Make reservation at Registration Desk.

Luncheons

Pathology Section Luncheon.—Tuesday, April 29, Copper Cup Room, to which guests, officers of the California Medical Association, and members of the Section on Surgery are invited. Members of the Section on Pathology are requested to attend the luncheon on Wednesday, Copper Cup Room, at which Dr. Z. E. Bolin will present "Pathology and Legal Medicine."

Pediatrics Section Luncheon.—Wednesday, April 30, which all members of the Section are requested to attend.

Fraternity, College, and Special Luncheons.—Announcements of any such will be placed on registration desk bulletin board.

DIAGRAM OF SECTION MEETINGS—FOUR-DAY SESSION

	Auditorium	Garden Room	Club Room	Copper Room	Children's Playroom "A"	Tower Room	Children's Playroom "B"	Room 723
April 28 2:30-5:30 p. m.	Medicine	Surgery	Pathology	Pediatrics	Eye, Ear, Nose and Throat	Gynecology	Dermatology	
April 29 9-11:30 a. m.	Medicine	Surgery and Pathology Union Meeting (Weidman)	Industrial Medicine and Surgery	Radiology	Eye, Ear, Nose and Throat	Urology	Dermatology	Anesthesiology
April 30 9-11:30 a. m.	Medicine and Pediatrics Union Meeting (Marriott)	Neuropsychiatry (Kempff)	Pathology (Exhibit)	Radiology	Obstetrics	Urology		Anesthesiology
May 1 9-11:30 a. m.	Medicine	Surgery		Neuropsychiatry		Industrial Medicine and Surgery		



GENERAL MEETINGS

All General Meetings will be held in the Auditorium

FIRST GENERAL MEETING  
Monday, April 28, 1 p. m.

- 1. *Invocation*—Rev. G. M. Cutting, Pastor of Del Monte Chapel.
- 2. *President's Annual Address*—Morton R. Gibbons, M. D.

SECOND GENERAL MEETING  
Tuesday, April 29, 11:30 a. m.

- 1. *The Value of Radiotherapy in Mediastinal Tumors*—A. U. Desjardins, M. D., Assistant Professor of Radiology, Mayo Clinic, Rochester.

- 2. *The Clinical Application of Recent Studies Concerning Chemical Equilibrium in the Body*—McKim Marriott, M. D., Dean and Professor of Pediatrics, Washington University, St. Louis.

THIRD GENERAL MEETING  
Wednesday, April 30, 11:30 a. m.

- 1. *Cretinism*—George M. Curtis, M. D., Associate Professor of Surgery, The University of Chicago.
- 2. *The Yellowing Dermatoses, With Special Reference to Xanthomas*—Fred D. Weidman, M. D., Professor of Dermatology, University of Pennsylvania, Philadelphia.

SECTION MEETINGS

See Section Index Below

ANESTHESIOLOGY SECTION

LORRULI A. RETHWILM, M. D., Chairman  
2217 Webster Street, San Francisco

WILLIAM W. HUTCHINSON, M. D., Secretary  
1202 Wilshire Medical Building  
1930 Wilshire Boulevard, Los Angeles

First Meeting—Room 723

Tuesday, April 29, 9 to 11:30 a. m.

- 1. Chairman's Address—*Report on Use of Sodium-iso-amyl-ethyl-barbiturate*—Lorruli A. Rethwilm, M. D., San Francisco.

- 2. *Chemical Adjunct to Anesthesia*—Chauncey D. Leake, Ph. D., University of California Medical School, San Francisco.

Pre-anesthesia predicates design to depress the central nervous system to basic level for anesthesia. Alkaloid group, the coal tar analgesics, alcohol derivatives and the barbiturates. The position of atropin for anesthetics premedicate. Supporting premedicate affecting general metabolism. Rational application of present knowledge.

Discussion opened by M. L. Tainter, M. D., San Francisco.

- 3. *Phenolphthalein Excretion After Administration of Sodium-iso-amyl-ethyl-barbiturate*—Ludwig A. Emge, M. D., 2000 Van Ness Avenue, San Francisco.

This paper will discuss the phenolphthalein excretion in operative and obstetrical cases following use of sodium-iso-amyl-ethyl-barbiturate and compare it to similar tests in operative cases managed with scopolamin-morphin and nitrous-oxid anesthesia.

- 4. *Tribromethanol as a Preoperative Narcotic*—Dorothy A. Wood, M. D., 1390 Seventh Avenue, San Francisco.

Description of the drug; calculation of the dosage; technique of administration. Safety of its use as a narcotic contrasted with its toxicity when used as an anesthetic. Case reports. Reaction of patients; effect upon pulse, blood pressure, and respiration; recovery of patient. Amount of anesthetic agent apparently diminished when tribromethanol is used as preliminary medication.

- 5. *Preoperative Medication*—Mary E. Botsford, M. D., 807 Francisco Street, San Francisco.

Valuation of the newer drugs for preliminary medication. Comparative merits of the barbiturates and avertin. A discussion of the anesthetic properties of these two agents. Their use in combination with spinal.

Second Meeting—Room 723  
Wednesday, April 30, 9 to 11:30 a. m.

- 1. *Modern Controllable Spinal Anesthesia—Basic Principles Involved*—Franklin I. Harris, M. D., 916 Four Fifty Sutter, San Francisco, and Edward H. Bolze, M. D., Room 1219, 450 Sutter Street, San Francisco.

Review of development; causes of former failures and fatalities. Pharmacology of novocain; physiochemical action. Action and effect of ephedrin; necessity of Trendelenberg position. Control of duration and height of anesthesia. Simplified technique confirmed by two hundred and fifty inductions. (Lantern slides.) Discussion opened by Harry W. Martin, M. D., Los Angeles.

- 2. *Circulatory Responses of Ephedrin and Related Drugs—Modifications by Local Anesthesia*—M. L. Tainter, M. D., Stanford University School of Medicine, San Francisco.

Cocain, not procain and butyn, subcutaneously in infiltration anesthesia doses, profoundly modifies circulatory responses to epinephrin, ephedrin, and related drugs. Modifications consist of sensitization, desensitization, or complete abolition of circulatory response, according to drug used. Phenomena important in systemic reactions from cocain, and in treating accidents of local anesthesia. (Lantern slides.) Discussion opened by Chauncey D. Leake, Ph. D., San Francisco.

- 3. *Infiltration Anesthesia in Obstetrical Surgery*—Sterling N. Pierce, M. D., 1200 South Alvarado Street, Los Angeles.

Inhalation anesthesia in surgical obstetrics has certain definite disadvantages, avoided by the use of local anesthesia. Certain positive advantages obtained by infiltration method; striking simplicity. Conclusions based upon several hundred cases. Author believes that the results in these cases attest to the adequacy of the method for obstetrical anesthesia, and to its safety.

Discussion opened by Lyle G. McNeile, M. D., Los Angeles.

- 4. Business meeting.

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## DERMATOLOGY AND SYPHILOLOGY SECTION

SAMUEL AYRES, JR., M. D., Chairman  
517 Westlake Professional Building  
2007 Wilshire Boulevard, Los Angeles

GEORGE F. KOETTER, M. D., Secretary  
812 Medical Office Building  
1136 West Sixth Street, Los Angeles

### First Meeting—Children's Playroom B

Monday, April 28, 2:30 to 5:30 p. m.

1. Chairman's Address—*The Kidney Function in Pemphigus*—Samuel Ayres, Jr., M. D., Los Angeles.

Phenolsulphonphthalein excretion when given intramuscularly and intravenously, urine examination, blood chemistry. Recent ideas concerning the etiology and treatment of pemphigus. The question of liver involvement. The significance of 'phthalein excretion in relation to arsenical therapy.

2. *Dermatological Psychoses*—C. Ray Lounsberry, M. D., 1111 Medico-Dental Building, 233 A Street, San Diego.

Introduction. Review of fundamentals in classical case of dermatitis, welding it closely into a psychotic state. Biographical sketch from birth to development of psychotic dermatitis in later adolescent period of life. Etiology in classical case. Diagnosis and treatment.

Discussion opened by Samuel Ayres, Jr., M. D., Los Angeles.

3. *Dermatology for Nurses*—Ernest Dwight Chipman, M. D., 501 Union Square Building, 350 Post Street, San Francisco.

Lecturer to nurses in training schools confronted with problem of teaching students enough to satisfy State Board requirements. Knowledge of purpura, pemphigus, and pellagra necessary; but dermatological dressing seemingly not. Teaching of nurses should have for objective making of good nurse rather than poor dermatologist. Article outlines practical treatment of subject with hope of constructive discussion.

Discussion opened by George Culver, M. D., San Francisco.

4. *Erythema Induratum*—Ernest K. Stratton, M. D., 414 Medico-Dental Building, 490 Post Street, San Francisco.

Report of a case associated with a chronic pneumonia (the location of which is probably the site of an old tuberculosis); tuberculous nodules on sclera, as well as a squamous cell epithelioma of skin.

Discussion opened by Hiram E. Miller, M. D., San Francisco.

5. *Trichorrhexis Nodosa as a Clinical Problem*—Charles R. Caskey, M. D., 715 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Foreword.—Report of findings in few cases to stimulate research. Definition of trichorrhexis nodosa, trichoclasia, and trichoptilosis. Various etiology theories—trophic, neurotic, mechanical, parasitic. Case reports. Conclusions: findings suggestive; not conclusive. Possibility of disease being caused by different but closely allied organisms. Plea for concerted research into this and other causes of alopecia. (Lantern slides.)

Discussion by Stanley O. Chambers, M. D., Los Angeles.

### Second Meeting—Children's Playroom B

Tuesday, April 29, 9 to 11:30 a. m.

1. *Gastric Analysis in Acne Rosacea*—N. N. Epstein, M. D., Room 1304, 450 Sutter Street, San Francisco.

Gastric analysis studies have been made on a group of patients with acne rosacea, using the alcohol test-meal and the histamine method of stimulating gastric secretion. In a large number of these cases the gastric acidity was low. Clinical improvement followed the administration of hydrochloric acid and pepsin.

Discussion opened by Garnett Cheney, M. D., San Francisco.

2. *Syphilis as a Moral, Economic and Teaching Problem*—Stanley O. Chambers, M. D., 1260 Roosevelt Building, 727 West Seventh Street, Los Angeles.

Modern problems in syphilis outlined. Attempt made to suggest methods for preventive control. These phases obviously represent more than drug values in the control of syphilis. Teaching of modern syphilology to layman offers greater efficiency in control of disease and is real step in direction of eradication.

Discussion opened by Ernest D. Chipman, M. D., San Francisco.

3. *Carotinemia*—Hiram E. Miller, M. D., 809 Fitzhugh Building, 384 Post Street, San Francisco.

Carotinemia is a yellowish discoloration of the skin seen generally on the face, palms, and soles, but may cover the entire body. It is frequently associated with diabetes. Differential diagnosis, methods of testing for the presence of carotin, clinical significance of the condition, etc., will be discussed.

Discussion opened by George F. Koetter, M. D., Los Angeles.

4. *Statistical Study of Three Thousand Cases of Acne*—Ruby L. Cunningham, University of California Infirmary, Berkeley, and C. J. Lunsford, M. D., 3115 Webster Street, Oakland.

Twelve thousand five hundred and twenty-six students at the University of California at Berkeley showed 2978 had acne. Report of a statistical study of these 2978, using 3170 as controls. Viewed from standpoints of age distribution, weight correction, complexion, distribution, lymph glands, menstrual history, and other related conditions, such as foci of infection, allergy, constipation, thyroid gland, operations, etc.

Discussion opened by N. N. Epstein, M. D., San Francisco.

5. *Motion Picture Demonstration of Selected Dermatological Cases From Stanford Medical School Skin Clinic*—Harry E. Alderson, M. D., 320 Medico-Dental Building, 490 Post Street, San Francisco.

## EYE, EAR, NOSE, AND THROAT SECTION

BARTON J. POWELL, M. D., Chairman  
510 Medico-Dental Building, Stockton

ANDREW B. WESSELS, M. D., Secretary  
1305 Medico-Dental Building  
233 A Street, San Diego

### First Meeting—Children's Playroom A

Monday, April 28, 2:30 to 5:30 p. m.

1. Chairman's Address—*Missed Intra-Ocular Foreign Bodies*—Barton J. Powell, M. D., Stockton.

Report of several cases of missed intra-ocular foreign bodies and importance of systematic examination of all eye injuries, regardless of history, with x-ray, ophthalmoscope, magnet, and localizing apparatus of Dr. William M. Sweet.

2. *The Ocular Findings in a Group of Unselected Diabetics*—H. Claire Shepardson, M. D., 204 Fitzhugh Building, 384 Post Street, San Francisco, and Joseph W. Crawford, M. D., Room 1635, 450 Sutter Street, San Francisco.

History of fifty proved diabetics carefully worked up, both as to the extent of the diabetes, the presence or absence of complicating



diseases as arteriosclerosis and renal disease, and the routine studies of the eyes in each.

Discussion opened by George N. Hosford, M. D., San Francisco.

3. *The Importance of a Correct Diagnosis in Operations on the Ocular Muscles*—Joseph L. McCool, M. D., 450 Sutter Street, San Francisco.

Convergent squint and phorias apparently result of faulty coördination of converging and diverging muscles; in reality, secondary to vertical abnormalities. Knowledge of muscle affected essential in surgical treatment. (Lantern slides of anatomy and physiology of eye muscles.)

Shortening of underacting muscle; guarded tenotomy or recession of opponent in same eye, or associated antagonist in fellow eye.

Discussion opened by Roderic O'Connor, M. D., Oakland.

4. *Personal Convictions Regarding Cataract Operations*—Hans Barkan, M. D., and Otto Barkan, M. D., 921 Medico-Dental Building, 490 Post Street, San Francisco.

Methods of procedure adopted at present as worked out from experience with several methods. Reasons for methods employed and against those not employed.

Discussion opened by Dwight H. Trowbridge, M. D., Fresno.

5. *Recurrent Retinal Hemorrhages*—Theodore C. Lyster, M. D., Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Recurrent retinal hemorrhages in young adults seen frequently. After trauma, lues, or probable focal cause (other than pulmonary) are excluded, a relatively large group probably tuberculous, and frequently with latent involvement of peribronchial glands remains. Other signs usually absent. Retinal tuberculosis, rare. Positive evidence secured with difficulty. Prognosis guarded, but relatively favorable, depending upon the duration and extent of involvement. Case histories.

Discussion opened by Wallace R. Briggs, M. D., Sacramento.

## Second Meeting—Children's Playroom A

Tuesday, April 29, 9 to 11:30 a. m.

1. *Management and Treatment of Otitis Media*—Clyde E. Harner, M. D., 923 Security Building, Long Beach.

Keynote of treatment should be conservatism, but not "hysterical" conservatism. Early incision of membrana tympani essential. Light general anesthesia preferable. Widespread use of phenolized glycerin only measure for relieving pain. Careful irrigation preferable to "dry" treatment. Treatment of throat and nasopharynx important. Removal of adenoids sometimes necessary. Oily drops in nose of infants should not be used as routine. Conclusions and summary.

Discussion opened by R. C. Martin, M. D., San Francisco.

2. *Low-Grade Ethmoiditis as the Cause of Certain Eye Conditions*—Wallace B. Smith, M. D., 812 Medico-Dental Building, 490 Post Street, San Francisco.

Sinuses in general; and their relation to focal infection diseases with especial reference to eye diseases. Low-grade ethmoid infection as cause of certain cases of postbulbar neuritis with central scotoma. Literature. Discussion of the several theories of mode of origin. Detailed report of the nose findings.

Discussion opened by Dohrmann K., Pischel, M. D., San Francisco.

3. *Carcinoma of the Larynx*—Simon Jesberg, M. D., 500 South Lucas Avenue, Los Angeles.

The incidence of carcinoma of the larynx;

the management and the duty of the doctor to his patient in this type of case.

Discussion opened by R. S. Tillotson, M. D., Woodland.

4. *Visual Disturbances Associated with Influenza*—Clifford B. Walker, M. D., 410 Auditorium Building, 427 West Fifth Street, Los Angeles.

Study of a group of cases which might be classed as idiopathic retrobulbar neuritis but which really have a virus infection of nasal origin, sometimes accompanied by a variable degree of grippe, or even encephalitic symptoms with coryza or sinusitis of insignificant or minor degree. Perimetric studies and differentiation from encephalitis with or without lethargica, sinusitis, and multiple sclerosis, ophthalmoplegia without migraine.

Discussion opened by M. F. Weymann, M. D., Los Angeles.

## GENERAL MEDICINE SECTION

WALTER P. BLISS, M. D., Chairman  
407 Professional Building

65 North Madison Avenue, Pasadena

ERNEST H. FALCONER, M. D., Secretary  
316 Fitzhugh Building

384 Post Street, San Francisco

### First Meeting—Auditorium

Monday, April 28, 2:30 to 5:30 p. m.

1. *Heart Rate and Size—Their Importance to the Physician*—William Dock, M. D., Stanford Hospital, San Francisco.

Recent studies of cardiac output and velocity of blood-flow have shifted the interest from other factors in connection with heart failure, its cause and its treatment. The heart volume and rate alone are significant in determining the energy spent by the heart. The importance of these facts in the diagnosis and treatment of heart conditions is discussed.

Discussion opened by A. S. Granger, M. D., Los Angeles.

2. *Eunuchoid Syndromes*—Hans Lissner, M. D., 208 Fitzhugh Building, 384 Post Street, San Francisco.

Definition: Distinguished from eunuchism; the preadolescent type in boys and girls; the postadolescent types in men and women; subjective symptoms; objective physical findings and roentgenological and other laboratory findings. Prognosis and treatment. Presentation of typical cases. (Lantern slides.)

3. *Allergic Toxemia and Migraines—Food Allergy a Cause*—Albert H. Rowe, M. D., 242 Moss Avenue, Oakland.

Allergic toxemia, characterized by marked mental confusion, irritation, nervousness, lack of initiative, weakness and aching of the body not uncommonly due to food allergy. Frequent in patients with other allergic manifestations. Family history of allergy not necessary requisite for allergic toxemia. Report of migraine and headaches due to food allergy during four years in private practice.

Discussion opened by Walter W. Boardman, M. D., San Francisco.

4. *Disturbances of Visual Pathways in Temporal Lobe Lesions*—Harry A. Cave, M. D., San Diego. (By invitation.)

This paper is based upon a study of a series of four cases of temporal lobe tumors in which the neurological findings were insufficient to localize the neoplasm accurately. By interrupting the visual pathways on their way to the occipital cortex, lesions of the temporal lobes produce hemianopic defects in the visual fields which make localization of the tumors possible.

Discussion opened by Howard C. Naffziger, M. D., San Francisco.

5. *Giardiasis in Children*—Sam J. McClendon, M. D., 2001 Fourth Street, San Diego.

Report based upon study of twenty-three cases in children. No definite characteristic symptoms ascribed to infection; indefinite gastro-intestinal symptoms, urinary disturbances, nervousness, and irritability are found in varying degrees. Pathogenicity of flagellate proved by finding of giardia in stool and clearing up of symptoms with effective treatment by bismuth salicylate, treparsol and stovarsol, with a nonirritating diet.

Discussion opened by John V. Barrow, M. D., Los Angeles.

**Second Meeting—Auditorium**  
**Tuesday, April 29, 9 to 11:30 a. m.**

1. *Pulmonary Tuberculosis—Clinical Classification*—Sidney J. Shipman, M. D., Medico-Dental Building, 490 Post Street, San Francisco.

Older classifications based largely upon extent of lesion or gross anatomical change as in Turban classification and classification of the American Sanatorium Association, which, however, attempted to unite extent of lesion with symptomatology or activity. Most valuable classification based upon actual pathology as well as extent; this furnishes valuable information for prognosis or treatment.

Discussion opened by Chesley Bush, M. D., Livermore.

2. *Hypochloremia*—George Morris Curtis, M. D., University of Chicago. (By invitation.)

3. *Arthritis*—Rodney F. Atsatt, M. D., 1421 State Street, Santa Barbara.

The treatment of arthritis is a problem which general medicine must supervise. The specialist should not be allowed to overburden the patient's power of endurance. Metabolic disturbances are the keynote in many cases, but fatigue is an important etiological factor. Proper physiotherapy alleviates much pain and overcomes many deformities.

Discussion opened by William J. Kerr, M. D., San Francisco.

4. *Undulant Fever*—Karl F. Meyer, Ph. D., Hooper Foundation for Medical Research, San Francisco. (By invitation.)

A critical discussion of the bacteriology and epidemiology of undulant fever in the light of recent observations, experimental studies and inquiries made in California and abroad.

Discussion opened by John Carroll Ruddock, M. D., Los Angeles.

5. *Late Lues Treated with a Single Strain of Malaria—Analytical Evaluation of Therapeutic Results in Four Hundred Cases*—Ross Moore, M. D., 915 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Late lues is a new biological and therapeutic division of the clinical course of syphilis. This series of cases is separated into two parts—late lues, in which treatment is beneficial; and terminal lues, in which treatment is nonbeneficial, the object being to create a new concept of syphilis, thereby making its therapeutics more accurate.

Discussion opened by H. G. Mehrtens, M. D., San Francisco.

**Third Meeting—Auditorium**  
**Union Meeting of General Medicine and Pediatrics Sections**

**Wednesday, April 30, 9 to 11:30 a. m.**

Program printed under second meeting of Pediatrics Section. See page 281.

**Fourth Meeting—Auditorium**  
**Thursday, May 1, 9 to 11:30 a. m.**

1. *Agranulocytic Angina with Apparent Cure*—George A. Gray, M. D., 209 St. Claire Building, San Jose.

A short summary of this unusual group of cases with a contribution to the therapeutic problem of agranulocytosis. A case report of an apparent cure following treatment with large doses of leukocytic extract.

Discussion opened by Herbert C. Moffitt, M. D., San Francisco.

2. *Raynaud's Disease*—William J. Kerr, M. D., University of California Hospital, San Francisco.

The paper will take up recent physiological studies on patients with varieties of Raynaud's disease which indicate the disease is a local manifestation of the failure of the blood vessels to react to cold. The vasoconstrictor influence is of little, or no, importance. Suggestions for treatment will be outlined.

Discussion opened by C. Latimer Callander, M. D., San Francisco.

3. *Acute Yellow Atrophy of the Liver*—Verne R. Mason, M. D., 838 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

Report of twenty cases of acute hepatic degeneration. Discussion of etiology and increasing incidence of the disease. Symptomatology of hepatic insufficiency. Possibility of recovery from mild attacks.

Discussion opened by Fred H. Kruse, M. D., San Francisco.

4. *Some Experiences with Fecal Vaccines*—William H. Strietmann, M. D., Strad Building, 230 Grand Avenue, Oakland.

Paper deals with the use of fecal vaccines for arthritis; method of W. B. Wherry, antigens from anaërobic and partial tension organisms, also aërobic. Skin tests performed. Interesting effects noted in skin lesions associated with arthritis. Report of cases.

5. *The Business of Medicine*—Rexwald Brown, M. D., 1421 State Street, Santa Barbara.

Hippocratic Code has fashioned mantle of tradition. Medicine challenged to justify position with relation to programs of other social forces. Medicine must develop statesman-like leadership. Physicians enmeshed in economic and administrative departments. Medical service expense to wealthy, to white-collar class, and to indigents.

Discussion opened by William Duffield, M. D., Los Angeles.

**GENERAL SURGERY SECTION**

CLARENCE G. TOLAND, M. D., Chairman  
902 Wilshire Medical Building

1930 Wilshire Boulevard, Los Angeles

SUMNER EVERINGHAM, M. D., Secretary  
400 Twenty-Ninth Street, Oakland

CLARENCE E. REES, M. D., Assistant Secretary  
2001 Fourth Street, San Diego

**First Meeting—Garden Room**

**Monday, April 28, 2:30 to 5 p. m.**

1. *Surgical Correction of Cleft Lip and Palate*—Albert D. Davis, M. D., 1001 Howard Building, 209 Post Street, San Francisco.

Types. Etiology. Time and sequence of operations. Failures and their prevention. Speech training and orthodontia. Lengthening the palate. (Lantern slide demonstration of cases.)

Discussion by E. F. Tholen, M. D., Los Angeles, and Emile Holman, M. D., San Francisco.

2. *The Treatment of Bone Tumors*—Edwin I. Bartlett, M. D., 1020 Medico-Dental Building, 490 Post Street, San Francisco.

Reviews the types of treatment employed up to the present time. Cites the advances made in the scientific study of bone tumors during the past few years. Points out the application



of this new gained knowledge in the selection of the therapeutic agent. Discusses the prognosis. (Lantern slides of selected cases and discussion of treatment employed.)

Discussion opened by A. U. Desjardins, M. D., and Charles Connors, M. D.

3. *Factors of Healing in the Repair of Intrapulmonary Abscesses and Persistent Bronchial Fistulae*—Emile Holman, M. D., Stanford University Hospital, San Francisco.

A discussion of the physiological processes underlying the repair of intrapulmonary abscesses, and the retarding effects of bronchial fistulae upon such repair, followed by a discussion of the principles governing the surgical procedures calculated to assist in the repair of intrapulmonary abscesses and in the cure of persistent or chronic bronchial fistulae with presentation of illustrative cases.

Discussion by Harold Brunn, M. D., San Francisco, and Fred R. Fairchild, M. D., Woodland.

4. *Diagnostic Pneumothorax in Lung Abscess Cases*—Harold Brunn, M. D., 1001 Fitzhugh Building, 384 Post Street, San Francisco, and William B. Faulkner, Jr., M. D., University of California Hospital, San Francisco.

Management of patients with lung abscesses has been decidedly influenced by the use of diagnostic pneumothorax. A discussion of the technique of diagnostic pneumothorax and the interpretation of diagnostic pneumothorax x-ray plates. Report of six cases of lung abscesses wherein diagnostic pneumothorax was employed to advantage in the selection of rational therapeutic measures.

Discussion by Sidney Shipman, M. D., San Francisco, and Frank S. Dolley, M. D., Los Angeles.

5. *Spastic Contraction Ring as a Cause of Postoperative Intestinal Obstruction*—Hubbard S. Hoyt, M. D., Monterey.

Report of a case in which the abdomen was reopened forty-eight hours after a gastro-enterostomy had been performed, because of symptoms of obstruction. Spastic contraction ring found in the jejunum at the distal end of the anastomosis, the intestine being contracted to a small white ring approximately three-eighths of an inch wide. Summary of cases reported in the literature. Discussion of possible causes. Necessity of reopening abdomen without the use of spasm-relaxing anesthetics or drugs if this condition is to be detected.

Discussion by J. Homer Woolsey, M. D., San Francisco, and Rexwald Brown, M. D., Santa Barbara.

#### Second Meeting—Garden Room

#### Union Meeting of Surgery and Pathology Sections Tuesday, April 29, 9 to 11:30 a. m.

Program printed under second meeting of Pathology and Bacteriology Section. See page 280.

#### Third Meeting—Garden Room

Thursday, May 1, 9 to 11:30 a. m.

1. *Tubed Pedicle Graft in Reconstructive Surgery*—George Warren Pierce, M. D., 720 Medico-Dental Building, 490 Post Street, San Francisco.

Advantages of tubed pedicle graft and problems of reconstruction successfully solved with its use. Technique of making pedicle and man-

agement of cases through various stages of transplantation. Report of cases showing original defects and successive stages of reconstruction, of nose, ear, and fingers, and also application of the pedicle to other parts of the body. Motion picture.

2. *Enemata From an Anatomical and Physiological Standpoint*—Silas A. Lewis, M. D., 1023 Taft Building, 1680 North Vine Street, Hollywood.

Motion picture of the anatomy of colonic tract. X-ray films used to illustrate filling of the normal colon with a barium enema. Comparison with films of chronic enema takers. Demonstration made of the amount of enema fluid retained after defecation and where and how the unexpelled portion is pocketed and retained. The paper discusses dangers of dilatation of the colonic tract by enemizing surgical cases and suggests a method of restoring normal bowel function, postoperative.

Discussion by William H. Daniel, M. D., Los Angeles, and Charles S. James, M. D., Los Angeles.

3. *Evidence of Nonabsorbability of Glucose Per Rectum*—Bernard Smith, M. D., 602 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Review of experimental work. Glucose solutions of different concentrations introduced into the colon and the effects noted on peripheral blood sugar and on respiratory quotient. Evidence that glucose introduced in five per cent solution is not absorbed from the colon. Occasional evidence in clinical observations of loss of glucose in the colon from bacterial action. Possible dangers in clinical use of the glucose per rectum method. Increase in fluid content in colon after hypertonic glucose solutions are given by rectal drip method.

Discussion by Rea Smith, M. D., Los Angeles, and Clarence G. Toland, M. D., Los Angeles.

4. *Method of Pylorectomy and Gastro-Enterostomy in One Operation*—Asa Collins, M. D., Room 2100, 450 Sutter Street, San Francisco.

When necessary to perform a gastro-enterostomy and pylorectomy at one operation, too much time is consumed in most methods to make it safe. Pylorectomy can be done by a technique used for the past fifteen years in a comparatively short time and with a low mortality. Statistical chart of ninety-four cases with end results. Technique of operation with illustrations. Slides of radiograms immediately and years after operation. End results. Summary.

Discussion by Rodney A. Yoell, M. D., San Francisco, and Carl L. Hoag, San Francisco.

5. *Internal Ring in Oblique Inguinal Hernia*—Albert R. Dickson, M. D., 604 California Medical Building, 1401 South Hope Street, Los Angeles.

Oblique inguinal hernia is the result of: (1) Preformed congenital sac. (2) Enlargement of the internal ring, which is an opening in the transversalis or endo-abdominal fascia. Discussion of structures involved with technique of anatomical repair of the internal ring, stressing fascial closure of this vitally important structure. Illustrated.

Discussion by William Kiskadden, M. D., Los Angeles, and A. D. Davis, M. D., San Francisco.

## INDUSTRIAL MEDICINE AND SURGERY SECTION

CHARLES A. DUKES, M. D., Chairman  
601 Wakefield Building  
426 Seventeenth Street, Oakland  
EDMUND J. MORRISSEY, M. D., Secretary  
201 Medical Building  
909 Hyde Street, San Francisco

**First Meeting—Club Room**  
**Tuesday, April 29, 9 to 11:30 a. m.**

1. Chairman's Address—*Ethics*—Charles A. Dukes, M. D., Oakland.

As applied to industrial medical practice, ethics is common sense in dealing with patient, industry, and industrial representative. Some of the difficulties in dealing with the insurance company representatives. Many of the large industries have medical departments in charge of medical representatives, conducted on ethical lines. Is there any difference in ethics? Is it not only a more complicated application of right?

2. *Lead Poisoning*—Ernest H. Falconer, M. D., 316 Fitzhugh Building, 384 Post Street, San Francisco.

Analysis of one hundred cases of lead intoxication occurring in industry, with special reference to: (1) Criteria necessary for diagnosis. (2) Length of disability. (3) Treatment.

3. *The Treatment of Acute Head Injuries*—Edmund J. Morrissey, M. D., 201 Medical Building, 909 Hyde Street, San Francisco.

In the treatment of head injuries it is of prime importance to determine the extent of the brain lesion. This is manifested by positive clinical findings and evidence of increased intracranial pressure. It is essential likewise to distinguish whether the pressure is a result of brain edema or extracerebral hemorrhage.

Discussion opened by E. B. Towne, M. D., San Francisco.

4. *Femoral Condylitis*—Merrill C. Mensor, M. D., 1038 Medico-Dental Building, 490 Post Street, San Francisco.

Reporting two cases having localized inflammatory process of the condyle of the femur, characteristic roentgenological appearances and clinical findings. The literature does not reveal any previous report of a similar syndrome. The importance of differentiating this from trauma is essential from an industrial aspect.

Discussion opened by James T. Watkins, M. D., San Francisco.

**Second Meeting—Tower Room**  
**Thursday, May 1, 9 to 11:30 a. m.**

1. *Fracture Dislocation of the Cervical Spine*—H. W. Spiers, M. D., 614 Westlake Professional Building, 2007 Wilshire Boulevard, Los Angeles.

An efficient method of reduction and retention. A discussion of the problems and the cardinal principles of the treatment of fractures as related to them. Case histories and x-ray films. A description of the method and a five-minute motion picture demonstration.

Discussion opened by Maynard C. Harding, M. D., San Diego.

2. *Difficult Fractures*—W. C. Adams, M. D., 802 Medical Building, 1904 Franklin Street, Oakland.

Showing difficult fractures of various bones with complications. Handling of fractures in case of complications. Methods of reduction and appliances. (Lantern slides.)

Discussion opened by E. W. Cleary, M. D., San Francisco.

3. *Bumper Fractures*—N. Austin Cary, M. D., 2939 Summit Street, Oakland.

A series of fractures in patients struck by automobile bumpers. Nature of the fracture. Method of treatment. End results in fifty-five cases.

Discussion opened by Leonard Barnard, M. D., Oakland.

## NEUROPSYCHIATRY SECTION

THOMAS G. INMAN, M. D., Chairman  
2000 Van Ness Avenue, San Francisco  
HENRY G. MEHRTENS, M. D., Secretary  
Stanford Hospital, San Francisco

**First Meeting—Garden Room**

**Wednesday, April 30, 9 to 11:30 a. m.**

1. *The Significance of Postural Tensions for Normal and Abnormal Human Behavior*—Edward J. Kempff, M. D., 44 Butterfly Lane, Santa Barbara.

Physiology of postural tensions in striped and unstriped neuromuscular segments. The proprioceptive stream and affective streams in association with the exteroceptive streams making most of the stream of mentation. Man's method of controlling the effect of environmental stimuli, particularly personal relations, upon himself. Man's method of controlling the inner streams of feeling and sensation in order to control himself in relation to his environment. Particular application of these principles to the functional neuroses and psychoses.

2. Business Meeting.

**Second Meeting—Copper Cup Room**

**Thursday, May 1, 9 to 11:30 a. m.**

1. *The Constitutional Psychopathic Inferior Personality—A Medico-Legal Problem*—Thomas J. Orbison, M. D., 616 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

The constitutional psychopathic inferior possesses inherent and implicit factors inimical to society. Graphs. Data to show unmistakable hereditary element. Stress character building in childhood and youth by disciplinary methods to form beneficent acquired characteristics. Emphasis upon duty and right of state to take cognizance of this menace since the patient is often committable.

2. *Brain Lesions with Homolateral Signs of Pyramidal Tract Involvement*—I. Leon Meyers, M. D., 1417 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Lesions of the cerebellum may give rise to spastic reflexes and a Babinski sign on the side of the lesion instead of the opposite side. This condition occasionally noted in lesions of the cerebrum. The rarity of such instances, with report of cases. Stress importance of securing data other than those resulting from damage to pyramidal tracts, in determining the laterality of the lesion.

3. *A Clinical Consideration of Epilepsy—Influence of Calcium and Water Metabolism Upon Seizures*—Helen H. Detrick, M. D., 2055 California Street, San Francisco.

Lines along which control of epileptic seizures has been attempted in past. Effects of fasting, ketogenic diet, and dehydration upon mineral metabolism of body. Clinical application of principles with special relation to therapeutic effects of a balanced salt-water regimen. Effect on convulsions, personality and general health of patient.

4. *Sodium Chlorid and Water Metabolism in the Convulsive States*—Frederick Proescher, M. D., Agnew.

This paper deals with the sodium chlorid and water metabolism in the convulsive states under rigid experimental conditions. The diagnostic significance of the sodium chlorid retention and its relation to seizures will be discussed.



**OBSTETRICS AND GYNECOLOGY SECTION**

KARL L. SCHAUPP, M. D., Chairman  
835 Medico-Dental Building  
490 Post Street, San Francisco

CLARENCE A. DE PUY, M. D., Secretary  
Strad Building, 230 Grand Avenue, Oakland

**First Meeting—Tower Room**

**Monday, April 28, 2:30 to 5:30 p. m.**

1. *Gonorrhea in the Female*—Albert V. Pettit, M. D., 2000 Van Ness Avenue, San Francisco.

Incidence in western cities; handling of infectious cases. Internal and external pathology of acute and so-called chronic gonorrheal infections. Criticism of methods of treatment. Operative and nonoperative treatments.

Description and criticism of newer methods; hyperpyrexia induced by foreign protein, hydrotherapy and diathermy.

Problem facing gynecologists in treatment of gonorrhea, from economic and social aspects. Case reports.

2. *Nonspecific Vaginal Infection*—Donald A. Dallas, M. D., 530 Medico-Dental Building, 490 Post Street, San Francisco.

Description of the various types of non-gonorrheal cervicitis and vaginitis as seen and studied in the Stanford University Women's Clinic, with appropriate methods of treatment for each form.

3. *Pelvic Endometriosis*—Alice Maxwell, M. D., University of California Hospital, Fourth and Par-nassus Avenues, San Francisco.

The importance of aberrant Mullerian tissue is apparent from the numerous reports appearing on pelvic endometriosis. The discussion will be concerned with theories of its etiology. The variation and severity of the symptoms depend upon the invasiveness of the aberrant endometrium and the resulting peritonitis and fixation of the involved structures. A diagnosis of the lesions and treatment of the condition will be presented.

**Second Meeting—Children's Playroom A**

**Wednesday, April 30, 9 to 11:30 a. m.**

1. Chairman's Address—*Resuscitation of the Newborn*—Karl L. Schaupp, M. D., San Francisco.

2. *Conduct of Normal Labor*—John Vruwink, M. D., 709 Medical Office Building, 1136 West Sixth Street, Los Angeles.

Definition of normal labor. Objective in the management of normal labor. Rôle of analgesia and anesthesia. Value and detriment of certain medical and surgical aids. Review of cases without analgesia, and with Gwathmey or twilight sleep. Suggestions in the management of the third stage and the immediate care of the nursing child.

3. *Conduct of Occiput Posterior Position*—T. Floyd Bell, M. D., 400 Twenty-Ninth Street, Oakland.

Study based on histories of occiput posterior position at the University of California Hospital. Internal rotation is considered in detail in relation to poor pains, parity, poor flexion, and in spontaneous deliveries. Interference in delivery with forceps and other means has been studied. Maternal and fetal deaths tabulated. Treatment is considered as to means of rotation, the use of anesthesia in long labors, and the type of delivery.

4. *Birth Injuries*—Louis I. Breitstein, M. D., 416 Union Square Building, 350 Post Street, San Francisco.

Plea for "better obstetrics"; better instruction of undergraduates; better diagnosis; better management in contracted pelvis, and better technique in operative procedures. Danger in use of forceps and also in prolongation of expectant policy. Need for closer coöperation with pediatrician and neurosurgeon. Motion picture of birth injuries.

**PATHOLOGY AND BACTERIOLOGY SECTION\***

W. T. CUMMINS, M. D., Chairman  
Southern Pacific Hospital, San Francisco

GEORGE D. MANER, M. D., Secretary  
Wilshire Medical Building  
1930 Wilshire Boulevard, Los Angeles

**First Meeting—Club Room**

**Monday, April 28, 2:30 to 5:30 p. m.**

1. Chairman's Address—W. T. Cummins, M. D., San Francisco.

2. *The Clinical Significance of Erythrocytic Measurements—A New, Simple Method of Determining*—Garnett Cheney, M. D., 703 Shreve Building, 210 Post Street, San Francisco.

History of red cell measurements. Laborious methods employed. Simplicity and accuracy of Eve's "halometer" for measuring average, mean diameters noted. Normal average sizes. Disorders in which measurements are of great, of considerable, and of doubtful value. The facility of Eve's method necessitates a wider clinical knowledge of subject. (Illustrated.)

3. *Some of the Factors Governing Tumor Susceptibility*—C. L. Connor, M. D., University of California Medical School, San Francisco. (By invitation.)

This is a summary of work on hereditary and racial susceptibility and immunity as studied by others, and a résumé of personal work on the effect of sex glands, and other glands, which may in some manner regulate the growth of tumors. (Illustrated.)

4. *The Flagellate, Trichomonas Hominis; Pathogenicity in the Rabbit, with Report of a Human Fatality*—Franklin R. Nuzum, M. D., Albert H. Elliott, M. D., and Blanche V. Priest, A. B. (By invitation.) Cottage Hospital, Santa Barbara.

The literature is summarized regarding the geographical distribution and incidence of *Trichomonas hominis* infestation. The symptomatology, pathogenicity, and results of animal experimentation are discussed. A series of inoculation experiments in rabbits are reported in detail. An instance of infestation in man, with complete necropsy examination is given.

**Luncheon Notices**

Luncheon on Tuesday in Copper Cup Room, to which guests, officers of the California Medical Association, and members of the Section on Surgery are invited.

Members of the Section on Pathology are requested to attend the luncheon on Wednesday in Copper Cup Room, at which Dr. Z. E. Bolin will present "Pathology and Legal Medicine."

**Scientific Exhibit**

A scientific exhibit of gross and microscopic specimens, illustrating the Mycoses, will be demonstrated in the corridor adjacent to the Club Room, together with roentgenologic pictures and charts, and other gross specimens illustrating various interesting phases of pathology. Exhibit will be personally demonstrated.

5. *Case Reports of Mycotic Diseases* (Illustrated):  
 Coccidioidal Meningitis—A. H. Zeiler, M. D., Los Angeles.  
 Blastomycosis—V. L. Andrews, M. D., Hollywood.  
 Actinomycosis—H. A. Thompson, M. D., San Diego, and S. P. Strange, M. D., San Francisco.  
 Sporotrichosis and Streptothricosis—H. S. Sumerlin, M. D., San Diego.  
 Aspergillosis—Newton Evans, M. D., South Pasadena.  
 Torular Meningitis—B. Frank Sturdivant, M. D., Pasadena.  
 Unusual Fungous Septicemia—O. I. Cutler, M. D., Loma Linda.  
 Histoplasmosis—J. F. Kessel, Ph.D., and Ralph Crumrine, M. D., Los Angeles. (By invitation.)

**Second Meeting—Garden Room**  
**Union Meeting with the Surgery Section**  
**Tuesday, April 29, 9 to 11:30 a. m.**

1. *The Deep Mycoses in Their Surgical Aspects—Rôle of Laboratory Diagnosis*—Fred D. Weidman, M. D., University of Pennsylvania, Philadelphia. (By invitation.)
2. *Symposium on Coccidioidal Granuloma:*  
 Internal Medicine—Herbert C. Moffitt, M. D., San Francisco.  
 Surgery—Emmet Rixford, M. D., San Francisco.  
 Pathology and Bacteriology—William Ophüls, M. D., San Francisco.  
 Dermatology—Douglass W. Montgomery, M. D., San Francisco.  
 Roentgenology (Illustrated)—William B. Bowman, M. D., Los Angeles.  
 Discussion by Howard Morrow, M. D., San Francisco, and Karl F. Meyer, Ph. D., San Francisco.

**Third Meeting—Club Room**  
**Wednesday, April 30, 9 to 11:30 a. m.**

1. *The Experimental Production of Arteriosclerosis*—Richard D. Evans, M. D., Cottage Hospital, Santa Barbara.  
 Arteriosclerosis is one of the oldest of pathological conditions and is the most important change in the degenerative diseases which are becoming increasingly prevalent. The types of sclerosis are described and the experimental work done on their etiology is summarized. Histological preparations will be demonstrated. (Illustrated.)
2. *Tularemia in Cattle and Sheep*—J. C. Geiger, M. D., Hooper Foundation for Medical Research, San Francisco.  
 Tularemia is primarily a disease of wild rabbits. Man becomes infected secondarily, the mode of transmission being from rodents through the bite of an infected fly, tick, or perhaps mosquito, or by contamination of cutaneous or conjunctival surfaces. The geographic and animal distribution of the disease must be very wide. Tularemic investigations in cattle and sheep, and their possible relationship to human beings, are fully discussed.
3. *Histologic Diagnosis of Tumors of the Glioma Group*—Cyril B. Courville, M.D., Los Angeles County General Hospital, 1100 Mission Road, Los Angeles, and L. J. Adelstein, M. D., Los Angeles. (By invitation.)  
 The histologic diagnosis of gliomas is presented from the standpoint of the general pathologist, with the use primarily of routine

staining methods. The interpretation of the histologic picture, thus presented, is facilitated by the use of specific metallic methods. Pathologists, and others interested in intracranial pathology, should acquaint themselves with a few, definite, characteristic histologic aspects of the common gliomas. (Illustrated.)

4. *The Colloidal Benzoin Test of Spinal Fluid and Its Clinical Value*—W. R. Dodson, M. D., Los Angeles County General Hospital, 1100 Mission Road, Los Angeles. (By invitation.)

In which the constancy of the benzoin reaction is studied in purulent meningitis, syphilis of the central nervous system and meninges, tuberculous meningitis, poliomyelitis, encephalitis and a miscellaneous group, comprising one thousand cases verified by clinical and laboratory findings and in part by autopsy.

**PEDIATRICS SECTION**

GUY L. BLISS, M. D., Chairman  
 1723 East First Street, Long Beach

DONALD K. WOODS, M. D., Secretary  
 Fifth and Laurel Streets, San Diego

**First Meeting—Copper Cup Room**  
**Monday, April 28, 2:30 to 5:30 p. m.**

1. Chairman's Address—*Problem Parents*—Guy L. Bliss, M. D., Long Beach.

The new development of applied psychology is of great assistance to modern pediatrics. The education of parents by classes in the public schools and also by mental hygiene societies is of great assistance. Foster homes for problem children while the parents are being educated are of great assistance.

2. *Pneumonia at the Los Angeles General Hospital—Review and Discussion of Cases During the Past Few Years*—E. E. Moody, M. D., 722 Westlake Professional Building, 2007 Wilshire Boulevard, Los Angeles.

New methods of treatment or new scientific data are not the scope of this paper. Pneumonia service in children in Los Angeles General Hospital is perhaps the largest in the state. The Mexican population furnishes a large part of the cases. Pneumonia classified. The pneumonia of last year showed an unusual incidence of influenza. Low death rate of our service. Open-air treatment for lobar cases.

Discussion by William Happ, M. D., Los Angeles, and S. J. McClendon, M. D., San Diego.

3. *The Duration of Breast Feeding in One Thousand Cases of American Well Babies*—E. J. Lamb, M. D., 1515 State Street, Santa Barbara.

Review of literature in comparison with similar studies. Synopsis: Character of labor, birth weight, etc. Duration of breast feeding estimated in per cent for months. Causes for weaning baby from breast. Artificial feedings substituted for breast milk.

Discussion opened by J. B. Manning, M. D., Santa Barbara.

4. *Blood Transfusions in Children*—Phillip Rothman, M. D., 925 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

The present status of blood transfusions in pediatrics is discussed. The merits of the procedure in the treatment of anemias, sepsis, pneumonia, and malnutrition are reviewed and illustrated with case reports. The causes of reactions, technique of administering blood, and essentials for proper matching are emphasized.

Discussion by E. P. Cook, M. D., San Jose, and W. W. Belford, M. D., San Diego.



5. *Hilum Tuberculosis in Children*—Joseph C. Savage, M. D., Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Hilum tuberculosis in children frequently overlooked. Necessity for more careful checking of children's chests in suspicious cases.

The value of the x-ray. Emphasis on the need of prolonged care.

Observation and rechecking of these cases.

Discussion opened by Lloyd B. Dickey, M. D., San Francisco.

#### Second Meeting—Auditorium

#### Union Meeting of General Medicine With Pediatrics Section

Wednesday, April 30, 9 to 11:30 a. m.

1. *The Rôle Played by Infection in the Disorders in Infants and Children*—McKim Marriott, M. D., Washington University School of Medicine, St. Louis. (By invitation.)

2. *Colic in the Second Trimester of Infancy*—A. J. Scott, Jr., M. D., 900 California Medical Building, 1401 South Hope Street, Los Angeles.

Colic in the second three months of infancy is not common. Etiological factors to be considered are: indigestion; angioneurotic edema; cerebral birth injuries; congenital anomalies as Meckel's diverticulum with volvulus, intussusception; pyuria and renal colic; the neurotic child with nervous parents; inflammatory diseases of the ear; strangulated hernia.

Discussion opened by Langley Porter, M. D., San Francisco.

3. *Abdominal Allergy in Infancy*—Henry E. Stafford, M. D., 242 Moss Avenue, Oakland.

Colic with or without vomiting often can best be treated when considered as an allergic manifestation. Illustrative cases and practical points in treatment are to be discussed.

Discussion by E. S. Babcock, M. D., Sacramento, and A. H. Rowe, M. D., Oakland.

4. *Congenital Heart Disease*—Hobart Rogers, M. D., Summit Medical Building, 400 Twenty-ninth Street, Oakland.

A fifteen-minute film of sixteen millimeters size, showing different phases of congenital heart disease. Discussion of the different points brought out by the film as it is run.

Discussion opened by William J. Kerr, M. D., San Francisco.

#### RADIOLOGY SECTION\*

IRVING S. INGBER, M. D., Chairman  
321 Medico-Dental Building  
490 Post Street, San Francisco

WILLIAM H. SARGENT, M. D., Secretary  
Franklin Building, 1624 Franklin Street, Oakland

#### First Day—Copper Cup Room

Tuesday, April 29, 8:30 to 11:30 a. m.

#### Business Session

1. Chairman's Address.
2. *Radiation Treatment of Carcinoma of the Respiratory Tract*—Orville N. Meland, M. D., 1407 South Hope Street, Los Angeles.

Malignancy of the respiratory tract is usually of the inoperable type. The exception to the rule is intrinsic carcinoma of the larynx. Carcinoma of the bronchial tree is benefited by x-radiation, and if it is discovered early by bronchoscopic examination, implantation of radium needles or radon seeds will retard the progress of the disease. Report of cases.

Discussion opened by Edward W. Chamberlain, M. D., San Diego.

\* Discussion must be limited to five minutes and general discussion on case reports.

3. *Multiple Myeloma With a Case Report*—Lloyd Bryan, M. D., and Joseph Levitin, M. D., Room 1124, 450 Sutter Street, San Francisco.

Lantern slide demonstration, showing effects of therapy on the tumor.

4. *The Effect of X-Ray on Tissue*—Henry J. Ullmann, M. D., 1520 Chapala Street, Santa Barbara.

Methods for determining the time after radiation when the greatest effect occurs, at least for a certain definite portion of the effect.

Discussion opened by A. U. Desjardins, M. D., Mayo Clinic, Rochester, Minnesota.

5. *Therapeutic Irradiation of the Ovaries*—Alfred C. Siefert, M. D., Merritt Hospital, Oakland.

The ovary, exclusive of reproductive function, occupies a dominant position in female organism in youth and maturity, in health and disease. Its periodic activity affects remote organs, normal or pathological.

Therapeutic irradiation and modification of ablation of function discussed; radiation treatment of benign gynecological diseases, and of extragenital affections of the female organism.

Discussion opened by William H. Sargent, M. D., Oakland.

6. *Radiosensitiveness of Lymphocytes and Its Significance in Radiotherapy*—A. U. Desjardins, M. D., Mayo Clinic, Rochester, Minnesota. (By invitation.)

#### Second Day—Copper Cup Room

Wednesday, April 30, 8:30 to 11:30 a. m.

1. *X-Ray Diagnosis of Lung Pathology*—Frank R. Ruff, M. D., Burnett Sanitarium, Fresno.

This article covers many lung conditions, with lantern slides to show the different diseases such as syphilis of the lung, Hodgkin's disease, abscesses, dermoid cysts, malignancies, unresolved pneumonia, pneumothoraces, empyema, etc., with a short discussion of each as to the differential diagnosis.

Discussion by Rollo G. Karshner, M. D., Los Angeles.

2. *A Case Simulating Thoracic Stomach*—James B. Bullitt, M. D., 303 Medico-Dental Building, San Jose.

3. *Diverticula of the Stomach—With the Report of Three Cases*—M. J. Geyman, M. D., 1520 Chapala Street, Santa Barbara.

4. *Chylo-Thorax*—R. G. Van Nuys, M. D., Franklin Building, 1624 Franklin Street, Oakland.

Report of one case with brief résumé of literature. These cases are rare and interesting. This case presents some unusual features.

5. *Ewing's Tumor*—Kenneth S. Davis, M. D., St. Vincent's Hospital, Los Angeles.

6. *High Milliamperage Technique*—John D. Lawson, M. D., Woodland Clinic, Woodland.

Report of five years' experimentations with a technique using milliamperage varying from 100 to 250. Comparison of efficiency and economy of this contrasted with lower milliamperage method.

7. *The Value of the X-Ray in the Diagnosis of Tracheobronchial and Pulmonary Tuberculosis*—M. L. Pindell, M. D., 678 South Ferris Avenue, Los Angeles.

Ten-year contract program. Physical findings versus x-ray findings. Conclusions.

## UROLOGY SECTION

CHARLES P. MATHÉ, M. D., Chairman  
Room 1831, 450 Sutter Street, San Francisco

HARRY W. MARTIN, M. D., Secretary  
1010 Quinby Building  
650 South Grand Ave., Los Angeles

## First Meeting—Tower Room

Tuesday, April 29, 9 to 11:30 a. m.

1. Chairman's Address—Charles P. Mathé, M. D., San Francisco.
2. *End Results in Perineal Prostatectomy by the Closed Method*—A. Elmer Belt, M. D., 722 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

This paper deals with the results in a group of perineal prostatectomies done by the closed method. The technique is resumed with modification used by the author. The comparison with the classical or open method bears upon the length of hospitalization, of wound healing, functional results together with changes in the postoperative care.

Discussion opened by George G. Reinle, M. D., Oakland.

3. *Radical Prostate-Seminal Vesiculectomy for Benign Hyperplasia with Infection*—Frank Hinman, M. D., 603 Fitzhugh Building, 384 Post Street, San Francisco.

Reason for operation. Technical steps of the first operation, illustrated with lantern slides. Report of cases; pathological findings; results, urination, sexual power.

Discussion opened by Leo Buerger, M. D., Los Angeles.

4. *The Obstructing Prostate and Its Surgical Treatment*—Nathan Hale, M. D., 418 Medico-Dental Building, 1127 Eleventh Street, Sacramento.

The author's results based on six years' records in one hospital. An attempt to record the end results of recognized operative procedures under ordinary conditions and usual hospital care.

Discussion opened by Wilbur Parker, M. D., Los Angeles.

5. *Clinical Manifestations of Bladder Tumors*—Louis Clive Jacobs, M. D., Room 1410, 450 Sutter Street, San Francisco, and Abelson Epstein, M. D., 870 Market Street, San Francisco.

A study of bladder tumors based upon a review of one hundred cases at Mount Zion Hospital, San Francisco. Special emphasis is placed upon frequency of occurrence; methods of diagnosis; necessity of complete cystoscopic investigation; value of roentgenology, including cystography; and biopsic findings. An evaluation of surgical diathermy is detailed.

Discussion opened by George D. Stilson, M. D., Long Beach.

6. *The Treatment of Acute Prostatitis*—Burnett Wright, M. D., 1137 Roosevelt Building, 727 West Seventh Street, Los Angeles.

A convenient and efficient method is described.

An apparatus that permits of continuous rectal irrigation with solutions of a constant, controllable temperature for long periods of time, will be illustrated by lantern slides.

Discussion opened by Edward W. Beach, M. D., Sacramento.

7. *Demonstration of a New Cystoscopic Instrument*—Herbert A. Rosenkranz, M. D., 1024 Story Building, 610 South Broadway, Los Angeles.

Demonstration of a device to prevent dragging out or displacement of renal catheters during withdrawal of the cystoscopic sheath.

## Second Meeting—Tower Room

Wednesday, April 30, 9 to 11:30 a. m.

1. Business Meeting.
2. *Nephroptosis—Diagnosis and Treatment: Review of Case Histories and X-Rays*—J. J. Crane, M. D., 514 Westlake Professional Building, 2007 Wilshire Boulevard, Los Angeles.

Diagnosis is based on: (a) Symptoms which are quite uniform for all cases. (b) Physical examination. (c) Kidney studies, pyelograms taken in supine and upright positions to show degree of ptosis, dilatation of calices and pelvis as well as kinking of ureters. Reproduction of pain by pyelogram, etc.

Treatment: (a) Nonsurgical. (b) Surgical: Methods.

Discussion opened by William E. Stevens, M. D., San Francisco.

3. *Ureteral Pain Persisting After Nephrectomy, Relieved by Ureterectomy*—Lewis Michelson, M. D., 434 Medico-Dental Building, 490 Post Street, San Francisco.

Erroneous idea that pain cannot be present in ureter after removal of kidney. Discussion as to cause of pain. Pathological findings and report of cases.

Discussion opened by B. H. Hager, M. D., Los Angeles.

4. *Pathology of Kidney and Ureter in Calculus Disease*—Leo Buerger, M. D., Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Salient features of pathological alterations induced by infection and calculus disease, analyzed with a view to improve methods for conservation of reno-ureteral tract.

5. *Management of Stag-Horn Stones in Unilateral Kidneys*—James R. Dillon, M. D., 301 Medico-Dental Building, 490 Post Street, San Francisco.

Introduction—Discussion of operative technique which will cause a minimum of destruction of kidney tissue and of function. Presentation of cases. Summary. (Lantern slides.)

Discussion of Doctor Buerger's and Doctor Dillon's papers by J. C. Negley, M. D., Los Angeles, and Paul A. Ferrier, Pasadena.

6. *Horseshoe Kidney—With Report of a Case in Which Partial Resection was Performed*—A. J. Scholl, M. D., 721 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

A short review of the anatomy of horseshoe kidneys is given, together with a discussion of the surgical approach in the treatment of various pathological conditions. A case is reported of resection of one-half of a horseshoe kidney.

Discussion by Edwin F. Chamberlain, M. D., San Diego.

7. *Ureteral Reflux in the Human Being*—H. A. R. Kreutzmann, M. D., 2000 Van Ness Avenue, San Francisco.

A summary of the various factors which cause ureteral reflux, with a discussion of its occurrence in normal people.

Discussion opened by Franklin Farman, M. D., Los Angeles.





HOTEL DEL MONTE—HEADQUARTERS

## ENTERTAINMENT PROGRAM

### GOLF

#### GOLF COMMITTEE

Elbridge J. Best, Chairman.....	San Francisco
John Crossan .....	Los Angeles
Orrin Cook .....	Sacramento
Harry Alderson .....	San Francisco
Clarence G. Toland.....	Los Angeles

For those who enjoy golf, the Monterey Peninsula offers abundant opportunity for recreation. It will be possible to play each day while attending the meeting.

On Sunday, April 27, there will be no medical tournament, but it will be possible, for those who wish, to play one of several courses.

Monday, the 28th, in the morning, there will be a special tournament on the Del Monte links.

Tuesday afternoon, the regular tournament will be held to decide the championship of the Association. There will also be a number of attractive prizes so

arranged as to give every player an equal chance to win.

Wednesday afternoon will be devoted to a tournament on the Pebble Beach links and some novel features will be introduced.

All competition will be based upon medal play, according to the U. S. G. A. rules. Failure to putt out on any hole disqualifies.

In view of the fact that the North and South Medical Golf Associations have decided not to hold their annual tournament this year because of the possibility that such a tournament might detract from the medical meeting, the number of contestants for the above tournaments will probably be large. It is therefore strongly urged that all players watch for detailed announcements and be on the first tee early in order that every one may complete his round in good time.

## PROGRAM FOR WOMAN'S AUXILIARY

#### STATE AUXILIARY OFFICERS

Mrs. H. S. Rogers, Petaluma.....	President
Mrs. W. H. Geistweit, San Diego.....	First Vice-President
Mrs. John Hunt Shephard, San Jose.....	Second Vice-President
Mrs. R. A. Cushman, Santa Ana.....	Secretary-Treasurer

#### Business Meetings

On Tuesday, April 29, at 10 a. m. a meeting of the Woman's Auxiliary of the California Medical Association will be held in the Lounge adjoining the main dining room. All members of county and state auxiliaries and all visiting women eligible to membership are invited to attend.

On Wednesday, April 30, at 10 a. m., a second meeting of the Woman's Auxiliary of the California Medical Association will be held in the Lounge. Dr. Morton R. Gibbons, president of the California Medical Association, and Dr. William Duffield, councilor of Los Angeles, will address this meeting. All members of the auxiliary and all visiting women, eligible to membership, are earnestly requested to attend.

#### Entertainment

##### Seventeen-Mile Drive

Tuesday afternoon, April 29, has been devoted to the enjoyment of the famous Seventeen-Mile Drive. All women guests are invited. Will those who have extra space in their cars furnish this information to

the registration desk that all available space may be used. The Chamber of Commerce and Arrangements Committee will endeavor to provide transportation for those who cannot be so accommodated.

#### Tea to President's Wife

In honor of Mrs. Morton R. Gibbons, a tea will be held at the Monterey Peninsula Country Club on Wednesday afternoon at four o'clock. Those who desire to attend will please secure tickets at the registration desk. Early reservation for all events is earnestly requested. Members who have available space in their cars should furnish this information at the time of purchasing tickets.

#### Call to Breakfast Conferences

The board of directors of the Woman's Auxiliary, consisting of the president, first and second vice-presidents, secretary-treasurer of the State Auxiliary, and the presidents and secretaries of each County Auxiliary will meet at nine o'clock breakfasts for informal conferences on Monday the 28, Tuesday the 29th, and Wednesday the 30th.

#### Luncheons

A luncheon table for members will be set apart in the main dining room, to which all members of the auxiliary are invited on Wednesday at one o'clock.



# STATE MEDICAL ASSOCIATIONS

## CALIFORNIA MEDICAL ASSOCIATION

MORTON R. GIBBONS.....President  
LYELL C. KINNEY.....President-Elect  
EMMA W. POPE.....Secretary

### OFFICIAL NOTICE

#### SOUTHERN PACIFIC TRAIN SCHEDULE TO DEL MONTE

Leave San Francisco..... 8:00 a. m. 3:00 p. m. 6:15 p. m.  
Arrive at Del Monte.....11:46 a. m. 6:20 p. m. 9:56 p. m.

\* \* \*

Leave Los Angeles..... 8:00 a. m. 8:15 p. m.  
Arrive at Del Monte..... 8:20 p. m. 8:07 a. m.

\* \* \*

Round trip rates to Del Monte:

From San Francisco.....\$ 6.00  
From Los Angeles..... 18.50

\* \* \*

Driving from South: Go to Salinas, turn left and drive straight to Del Monte.

Driving from North: Go to Salinas and on through town direct to Del Monte. Do not make Los Angeles turn.

\* \* \*

For hotel rates and information, see page 126 of the February issue of California and Western Medicine.

### COUNCIL MINUTES

#### Minutes of the One Hundred and Eighty-Sixth Meeting of the Council of the California Medical Association

*Approved at the One Hundred and Eighty-Seventh  
Meeting of the Council of the California Medical  
Association, January 18, 1930*

Held at the home of Dr. George H. Kress,  
Uplifters' Ranch, Santa Monica Canyon, Los Angeles,  
Saturday, September 28, 1929, at 11 a. m.

**Present.**—Doctors Gibbons, Kinney, Pallette, Arnold, Duffield, Moseley, DeLappe, Phillips, Coffey, Hamlin, Harris, Rogers, Hunter, Cushman, Kress,

Catton, Kelly, Peers, Pope, and General Counsel Peart.

**Absent.**—None.

1. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

2. **Minutes of the Council.**—The chairman stated that the minutes of the 181st, 182nd, 183rd, 184th and 185th meetings of the Council had been mailed to all members of the Council, and if there were no objections, he would entertain a motion for their approval without further reading.

Action by the Council.—On motion of Duffield, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 181st, 182nd, 183rd, 184th and 185th meetings of the Council as mailed to all members, be approved.

Doctor Kress then stated that he believed it was advisable at each annual session to present the minutes of the previous day for approval in order that Council minutes might receive earlier publication in the journal.

Action by the Council.—On motion of Kress, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That at annual meetings, the minutes of the previous day's meeting be taken up for approval at the next meeting of the Council.

3. **Minutes of the Executive Committee.**—The chairman stated that the minutes of the 113th and 114th meetings of the Executive Committee had been mailed to all members of the Council and if there were no objections, he would entertain a motion for their approval without further reading.

Doctor Kress asked that minute 4 of the 114th meeting on "Standing Committees" be changed to read "Letter from Doctor Kress suggesting that by mutual agreement councilors who are serving on standing committees and who would be elected for

three-year terms, resign at the organization meeting of the Council each year." This would provide for a reshifting of councilors to different standing committees to fit in with the wishes of different councilors in case they had an especial interest in the work of some one committee.

Doctor Kress asked that a change be made in the introductory sentence to minute 28 on "Wine Tonics"; but waived his request for change, after discussion.

Doctor Kress stated that the motion of furnishing bound volumes of the journal, minute 32, was made by Doctor Pallette, duly seconded. Such change in the minutes was authorized.



Colton Hall



Action by the Council.—On motion of Kelly, seconded by Kinney, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 113th and 114th meetings of the Executive Committee, as amended, be approved.

**4. Offices of the Association.**—The secretary-treasurer reported that pursuant to action of the Council, the offices of the Association had been removed to rooms 2004 to 2007, Four-Fifty Sutter Street, on the 25th of September.

Action by the Council.—On motion duly made and seconded and unanimously carried, the following resolution was adopted:

Resolved, That the offices of this Association be and the same are hereby fixed and located at rooms 2004 to 2007, Four-Fifty Sutter Street, San Francisco, notice thereof having been sent by mail to all officers of the Association, section officers, all county secretaries; and to all members by publication in the official notices in the October issue of the journal.

**5. Committee on History of the California Medical Association.**—Letter from Dr. Emmet Rixford asking if any action had been taken at the last annual meeting in re the Committee on the History of the California Medical Association was presented. It was stated that the formation of the standing committees provided for in the new constitution had automatically dissolved all special committees existing under the previous constitution. Doctor Rixford's letter stated that he had still on hand a check for \$100 which had been allowed his committee for clerical help and postage. It was decided that the \$100 should be returned to the secretary-treasurer for deposit in the general funds of the Association and that Doctor Rixford be asked to submit a statement of any expenses incurred. Doctor Kress stated that the work of the Historical Committee would now be taken over by the Committee on History and Obituaries.

**6. Committee on Medical Defense.**—Letter from Doctor Trowbridge expressing regret at his inability to serve on the Committee on Medical Defense was read.

Action by the Council.—On motion of Harris, seconded by Kelly, and unanimously carried, it was

Resolved, That the resignation of Dr. Dwight Trowbridge be accepted with regret, and that Dr. James L. Maupin, Sr., be appointed a member of the Committee on Medical Defense, to fill the unexpired term of Doctor Trowbridge.

Letter from Dr. Mott H. Arnold submitting his resignation as a member of the Committee on Medical Defense was read.

After discussion, Doctor Arnold decided to withdraw his resignation and remain on the committee. The membership of the committee was then stated to be Doctors Mott Arnold, George Reinle, J. L. Maupin.

**7. Standing Committees.**—Doctor Kress stated that it had been decided to place a councilor on each standing committee so that he could act as a liaison officer between the Council and the committee and that it might be well if all councilors serving on standing committees resigned at the reorganization meeting of the Council each year since such resignations would provide for any adjustment of membership on the committee which might be advisable.

Action by the Council.—On motion of Kress, seconded by Gibbons, and unanimously carried, it was

Resolved, That it be the sense of the Council that at the reorganization meeting of the Council each year, the councilors who are on standing committees shall submit their resignations on such committees and the Council shall proceed to readjust the councilor representation on the standing committees as would seem to the best interests of the Association, by mutual consent.

Doctor Rogers stated that it might be desirable for the Council to name the chairmen of standing committees since at present the councilor was instructed to call the committee together for organization and election of a chairman and since his vote decided the

chairmanship, it was liable to cause hard feelings. No action taken.

Action by the Council.—On motion of Kress, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, By the Council of the California Medical Association, that a form letter such as is appended to this resolution shall be sent to each member of every standing committee within two weeks after the annual session of the Association; and be it further

Resolved, That if the members of a standing committee do not of themselves organize and notify the central office of the Association of such organization within a period of two months after the annual session of the Association, then the Executive Committee shall have the power to nominate a chairman and secretary of such standing committee. The secretary of the Association shall send such nominations to each member of each such committee with a reply blank asking each such member to register his vote, so that each such committee shall be properly organized, and be able to take up its work for the Association.

#### Form Letter

To the Members of the Standing Committee on.....  
Names (3)

Dear Doctors:

The Constitution and By-Laws of the California Medical Association (see Chapter V, Section V) provides that each standing committee shall elect its own chairman and secretary.

It is important that this be done if the committee is to properly function.

Recognizing that such organization may sometimes be overlooked by members of the standing committees, the enclosed resolution bearing on the subject has been passed by the Council.

In accordance therewith the members of this committee are herewith notified that the Executive Committee of the California Medical Association has nominated as chairman of your committee, Doctor ....., and as secretary, Doctor .....

Unless a majority vote is cast against such nominations these officers will be requested to act in such capacity until at some subsequent meeting of your standing committee the members ratify the above or make other selections for chairmanship and secretaryship.

Trusting this will be acceptable, we are

THE EXECUTIVE COMMITTEE.

By .....  
Secretary-Treasurer.

**8. Radio Broadcasting.**—The secretary read a letter from the San Francisco County Society enclosing letter from a doctor relative to broadcasting the American Medical Association health material over KFRC. It was stated that the Air Health Institute of Oakland broadcasting over KGO was desirous of having the Association approve its broadcasting. Doctor Cushman stated that broadcasting was being carried on in Orange County under the auspices of the county society. General discussion was then entered into and it was stated that if the Association approved the broadcasting of one concern it would immediately be swamped with requests for approval from all sources and the amount of work involved would be so great that it would be much more satisfactory to prepare and broadcast our own programs. If this were done, the Association could answer all requests for approval with the statement that we did our own broadcasting and therefore did not approve any other broadcasting programs.

Doctor Kelly stated that he had investigated the matter of broadcasting and had obtained the following figures:

Before 6 p. m., \$50 for fifteen minutes hookup of KFRC, San Francisco, and KHJ, Los Angeles.

Before 6 p. m., \$25 for fifteen minutes hookup of KFRC, San Francisco, only.

After 6 p. m., \$40 for fifteen minutes hookup of KFRC, San Francisco, only. Los Angeles, KHJ, will not allow lectures of any kind after 6 p. m.



It was stated that fifteen minutes would be ample time to present a paper on a subject of interest to the public. These papers could be prepared by an authority on the subject to be presented, and read by anyone having a good knowledge of medical terms and a satisfactory voice for delivery before the microphone. Doctor Kelly stated that he had not investigated whether or not there would be further expense involved in delivering the programs. It was felt that it would be advisable to omit the names of the doctors who prepared the papers and merely state that the talks were prepared by a prominent member of the California Medical Association who is considered to have a special knowledge of the subject.

Action by the Council.—On motion of Kress, seconded by Kinney, and unanimously carried, the following resolution was adopted:

Resolved, That the Executive Committee be requested to investigate the matter further, with power to act; provided that it does not engage in any contract for longer than one year or at a greater expense than \$3000; with the understanding that any radio broadcasting shall be absolutely impersonal without the use of any names of individuals.

Action by the Council.—On motion of Kress, seconded by DeLappe, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association refer to the Executive Committee for investigation any medical broadcasting by members of the medical profession with instructions to call to the attention of such medical broadcasters defections in methods of broadcasting if it seem desirable; and make a report to the Council in due time.

Doctor Moseley stated that since we had decided to answer all requests for approval with the statement that the Association did not approve any broadcasting but its own, he did not see that any further action was necessary.

**9. First Aid and Minor Medical Care (Committee on Public Health and Instruction).**—Doctor Rogers stated that the Committee on Public Health and Instruction had not been organized early enough to submit a report on the question of the growing tendency of physical instructors to give first aid and minor medical care to students, but that in answer to his personal investigations he had received the reply that the men who take up physical instruction are not physicians and unless physicians can be encouraged to go into this type of work the question will undoubtedly always be present. Doctor Kress called attention to correspondence regarding the Department of Health and Physical Education. Doctor Rogers stated that he had received this correspondence and it would be referred to the chairman of the Committee on Public Health and Instruction.

**10. Mexican Medical Men.**—Doctor Kress stated that Mr. C. N. Thomas, who was desirous of having some of the medical men from Mexico as guests of the Association during next spring had been to visit him but that the plan was very indefinite and from conversation with other persons who knew the Mexican situation and from the results of the attempt of the American Medical Association along this line it appeared impractical. No action taken.

**11. Committee on Medical Economics.**—Letter from Dr. John H. Graves, chairman of the Committee on Medical Economics, stating that at present the committee was gathering information on the cost of sickness, was read.

Action by the Council.—On motion of Kelly, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That the report of the Committee on Medical Economics be accepted.

**12. Incorporation of the Association.**—The secretary-treasurer reported that a second letter on incorporation had been mailed to members who had not yet cast their ballots and that only 800 votes were needed to make the necessary two-thirds vote. It was

felt that the full quota of votes would be received from this second canvass, but in the event that the ballots were slow in coming in the Executive Committee could take the matter in hand. It was suggested that the names of members who had not yet cast their ballot be sent to some of the different county societies.

Action by the Council.—On motion of Duffield, seconded by Coffey, and unanimously carried, it was

Resolved, That the Executive Committee be empowered to take such action as is necessary to expedite the acquiring of the necessary two-thirds ballot.

**13. Narcotics.**—Letter from the Bureau of Legal Medicine and Legislation submitting a proposed Uniform State Narcotic Act, was presented. No action taken.

Correspondence from Dr. William Cole and the Board of Medical Examiners regarding the possibility of having druggists communicate with doctors before filling prescriptions for narcotics, to eliminate the possibility of forgery of doctors' names, was read.

Action by the Council.—On motion of Kelly, seconded by DeLappe, and unanimously carried, the following resolution was adopted:

Resolved, That the correspondence be filed.

**14. Woman's Auxiliary.**—Correspondence from Mrs. R. A. Cushman, secretary of the Woman's Auxiliary, asking that a change be made in the rules governing the Woman's Auxiliary which would permit widows of physicians to become members, was presented. It was stated that the Executive Committee recommended such change.

Action by the Council.—On motion of Duffield, seconded by Peers, and unanimously carried, the following resolution was adopted:

Resolved, That the recommendation of the Executive Committee be approved.

Letter from Mrs. Henry S. Rogers, president of the Auxiliary, asking that some work be given the Auxiliary, was read. It was pointed out that the County Auxiliaries had to be organized through the county medical societies and in many cases a lack of interest was shown by the county societies. It was felt that the county societies should be urged to cooperate with the Auxiliary. Doctor Gibbons stated that since the formation of the Auxiliary was an obligation of the state society, it might be well to select topics such as are used by the American Medical Association and furnish them to the various Auxiliaries.

Action by the Council.—On motion duly made and seconded, and unanimously carried, the following resolution was adopted:

Resolved, That the Council authorize a subscription to the official publication of the Woman's Auxiliary of the American Medical Association for each county society; such copy to be sent to the secretary of the county medical society with instructions to forward the same letter to the secretary of the county unit of the Woman's Auxiliary.

Action by the Council.—On motion of Kress, seconded by Duffield, and unanimously carried, it was

Resolved, That the general supervision of the Woman's Auxiliary be referred to the Committee on Associated and Affiliated Societies.

Doctor Kinney suggested that the editor be asked to put a note in the editorial column regarding the matter.

**15. Coöperative Diagnostic Laboratories.**—Correspondence from Dr. Olin West regarding the Coöperative Diagnostic Laboratories of Los Angeles was presented. Discussion was then had of the ethics of members interested in such a laboratory. It was stated that investigations and reports had been made by committees of the Los Angeles County Medical Association. It was felt that the question of ethics involved was primarily one for the county society to solve in this case but that inasmuch as the problem involved was one that would probably be coming up in other communities, it would be well to study the case.



Action by the Council.—On motion of Catton, seconded by Gibbons, the following resolution was adopted:

Resolved, That inasmuch as this is an involved problem, the whole matter be referred to the Committee on Hospitals, Dispensaries and Clinics, for report back to the Council.

**16. Herzstein Bequest.**—The secretary-treasurer informed the Council that \$941 interest from the Herzstein Bequest Fund had been credited to the account of the Association; this fund to be used for the suppression of quackery.

Action by the Council.—On motion of Kelly, seconded by Kress, and unanimously carried, the following resolution was adopted:

Whereas, By the will of Dr. Morris Herzstein a Trust Fund in the sum of \$20,000 was established with the Wells Fargo Bank and Union Trust Company, the income of which is to be used by this Association for suppression of quackery in the practice of medicine, and

Whereas, In the opinion of the Council of the California Medical Association, one of the most effective methods of suppressing quackery is to spread and disseminate the true facts of scientific medicine, and

Whereas, The Council has at its meeting on September 28, 1929, authorized and directed the Executive Committee to establish a radio broadcasting service if it so decides; now therefore be it

Resolved, That in the event that the Executive Committee determines to establish such radio broadcasting service, that the accumulated and accruing interest from the Herzstein Bequest be used to defray to the extent thereof, the cost of such service; and be it further

Resolved, That appropriate mention be made of the contribution of this bequest to said work in each announcement.

It was suggested that it might be well in broadcasting to mention that part of the funds for broadcasting were from the bequest; or call the broadcast the California Medical Association Herzstein Hour.

**17. Retired Members.**—Letter from the San Diego County Society requesting that Dr. R. Lorini be granted retired membership in the Association, was read.

Action by the Council.—On motion of Harris, seconded by Kress, and unanimously carried, the following resolution was adopted:

Resolved, That Doctor R. Lorini of San Diego be granted retired membership in the California Medical Association on account of retirement from active practice.

Letter from the San Bernardino County Society requesting that Dr. W. H. Craig of Upland be granted retired membership in the Association, was read.

Action by the Council.—On motion of Kinney, seconded by DeLappe, and unanimously carried, the following resolution was adopted:

Resolved, That Dr. W. H. Craig of Upland, San Bernardino County, be granted retired membership in the California Medical Association on account of retirement from active practice.

It was decided that the list of doctors holding affiliate membership under the former Constitution should be submitted for approval or rejection as retired members.

Action by the Council.—On motion of Duffield, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That the question of status of affiliate members under the previous Constitution be referred to the Executive Committee with power to act.

**18. Protex Company.**—Correspondence regarding the Protex Company was presented and it was felt that the action of the Executive Committee covered the situation and no further action was necessary.

**19. Secretary of Surgical Section.**—Letter from Dr. Dexter Richards stating that he would be unable to continue as secretary of the Northern Division of the

Surgical Section on account of absence and illness was presented. Letter from Doctor Toland, chairman of the Surgical Section, stated that in accordance with Doctor Richards' suggestion, he recommended that the Council appoint Dr. Sumner Everingham to act as secretary of the Northern Division, was also presented.

Action by the Council.—On motion of Kinney, seconded by DeLappe, and unanimously carried, the following resolution was adopted:

Resolved, That Dr. Sumner Everingham be appointed Northern secretary of the Surgical Section to fill the unexpired term of Dr. Dexter Richards.

**20. Ownership of Papers.**—In accordance with the request of the Executive Committee the following form was submitted which will be signed by each applicant for space on an annual program, stating that all papers shall be the property of the Association and shall not be published elsewhere unless released in writing by the Committee on Publications:

(Note. By ruling of the Council, this blank, which incorporates provisions of Constitution and By-Laws, must be signed by all members who submit papers at an annual session.)

Place —, Date —.

I hereby agree that my paper, entitled —, which has been accepted by the section officers for presentation before — section of the — (year) annual session, is the property of the California Medical Association for exclusive publication in CALIFORNIA AND WESTERN MEDICINE, the official journal of the California Medical Association (if approved for publication therein by the editors), and that the original manuscript thereof shall be delivered to the secretary of said section immediately after it has been read, and by him transmitted promptly to the Association secretary at the office of the Association.

I understand and agree that my above article shall be published in CALIFORNIA AND WESTERN MEDICINE only unless released in writing through the Committee on Publications of the California Medical Association voluntarily or in response to a written request from me in which I state why such release is desired.

Signed .....

Address .....

A member of the — County Medical Society, a component unit of the California Medical Association.

**21. Paper of Doctor Voorsanger.**—Page proof of paper of Dr. William Voorsanger was presented to the Council, in which four pages of tables were included.

Action by the Council.—On motion of DeLappe, seconded by Harris, and unanimously carried, it was Resolved, That the tables be not published in the journal but that a footnote be inserted stating that the tables appear in the reprint of the article.

**22. Association Letterheads.**—The secretary-treasurer presented a sample letterhead for the Association. It was the sense of the Council that the editors be given full authority to determine the type of paper to be used by the Association. Letterhead as submitted was approved by the editors.

**23. Insurance on Furniture.**—The question of renewing the policy for insurance covering furniture of the Association was discussed and on motion of Moseley, seconded by Harris, and unanimously carried, the following resolution was adopted:

Resolved, That the furniture be insured for the full insurable value.

**24. Bond for Secretary.**—It was pointed out that the new Constitution provided for the bonding of the secretary.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was adopted:

Resolved, That the secretary-treasurer be placed under surety company bond in the sum of \$5000 covering the faithful performance of her duties.

**25. Right to Doctorate.**—Correspondence from Dr. A. W. Meyer regarding the right of a doctor holding an M. D. degree from an accredited school who is not



licensed in California to use the letters "M. D." after his name, was presented. Section 17 of the Medical Practice Act was discussed. Doctor Kress stated that he had prepared an editorial on the subject which would be sent to all councilors together with a copy of Doctor Meyer's correspondence, at which time they could make any comments they desired.

**26. Colon Machine.**—Doctor Kelly stated that the management of the Four-Fifty Sutter Building was anxious to keep any questionable tenants from the building and had asked if a tenant handling a colon flushing machine would be considered objectionable. The Council stated that it had no reaction to the question.

**27. Date and Place of Spring Council Meeting.**—After discussion, the date of the next meeting of the Council was set as Saturday, January 18, 1930, at the offices of the Association at San Francisco.

**28. Noon Adjournment.**—At this point the Council adjourned for luncheon.

**29. Call to Order.**—The meeting was called to order by the chairman; all members of the Council who attended the morning session being present except Dr. Mott H. Arnold.

**30. Medical Practice Act and Basic Science Act.**—Discussion was had on the revision of the Medical Practice Act and the advisability of initiating a basic science act. Mr. Peart pointed out the necessity of protecting the M. D. degree.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was adopted:

Resolved, That the Council appoint a special council committee to study and bring in a prompt report concerning a possible revision of the California Medical Practice Act, and a basic science law; that said committee be constituted as follows: the president, the president-elect, the secretary, the editor, the chairman of the Council, the chairman of the Executive Committee, one councilor, the general counsel, three members of the Committee on Public Policy of the California Medical Association, the deans of the medical schools of the University of California, Stanford, the College of Medical Evangelists and the University of Southern California, the president and the secretary of the Board of Medical Examiners, Doctor Molony, and Doctor Gundrum of the State Board of Health. The chairman of the Council to appoint one member as chairman of the entire committee and three sub-chairmen, one from the subgroup south of the Tehachapi, one from the Bay region and one from the members not included in the two preceding groups. Each group or sub-committee to meet as soon as possible to study these matters and to formulate its recommendations, the same to be submitted at a session of the entire committee to be held on call early in January. The entire committee then to meet and formulate a report to be submitted at the spring session of the Council of the California Medical Association.

The committee was then stated to be as follows:

Bay Region—Morton R. Gibbons, group chairman; Oliver D. Hamlin, T. Henshaw Kelly, Emma W. Pope, Walter B. Coffey, Joseph Catton, Langley Porter, William Ophüls.

Los Angeles—George H. Kress, general chairman; Lyell C. Kinney, William Duffield, Percy T. Magan, group chairman; William Cutter, William Molony.

At Large—Junius Harris, group chairman; Percy Phillips, Charles Pinkham, Frederick Gundrum.

**31. Medical Care.**—Dr. Walter B. Coffey stated that at the last annual meeting he had been appointed by the Council to devise a plan for the care of sick individuals of limited incomes. Doctor Coffey then presented a written outline of his plan for the care of individuals having an income of \$2500 or less, together with a letter from his personal attorney (Doctor Coffey having been unable to see General Counsel Peart), stating that he had hurriedly glanced over the plan and believed it was legally feasible. Doctor Coffey stated that his plan was presented

merely as a working basis and that it might be possible to devise a better mode of procedure, but that it was his belief that some such plan was feasible and workable.

Doctor Cushman spoke of the work of the Medical Economics Committee on the study of the cost of medical care. After discussion, it was felt that Doctor Coffey's committee and the Medical Economics Committee should confer.

Action by the Council.—On motion of Kress, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That the plan of Doctor Coffey for the medical care of individuals having incomes of \$2500 or less yearly be referred to the Executive Committee for study and that the Committee on Medical Economics be called into consultation with the Executive Committee and the legal aspects of the plan worked out.

Doctor Coffey's written outline of his plan with the memorandum from his personal attorney was then ordered mimeographed and a copy thereof, with copy of the original notes on the plan by Doctor Kress was ordered sent to all councilors and to the members of the Committee on Medical Economics.

**32. Resolution of Appreciation.**—Action by the Council.—On motion of Moseley, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That this Council express its appreciation to Doctor and Mrs. Kress for their generous hospitality.

**33. Adjournment.**—There being no further business, the meeting adjourned.

OLIVER D. HAMLIN, *Chairman.*

EMMA W. POPE, *Secretary.*

#### COMPONENT COUNTY SOCIETIES CONTRA COSTA COUNTY

One of the most successful and the best attended regular meetings for many years was held by the Contra Costa County Medical Society at Richmond on March 11, 1930.

The meeting was opened by Dr. J. W. Bumgarner, president of the society, who introduced Dr. H. J. Templeton of Oakland. The speaker gave a complete presentation on "Ringworm Infection of the Feet," discussing incidence, secondary infection, types, and therapy. The recent work done at the University of California on this most common condition was reviewed by the speaker. The importance of ringworm of the feet in public health was stressed. The resistance of this condition to all forms of therapy and the results to be expected from each form were depicted in a clear manner. It is important to individualize the treatment of these cases. The efficiency of various antiseptics was discussed in detail.

The second paper of the evening was presented by Dr. O. H. Garrison, also of Oakland. His topic was on "Newer Concepts in the Treatment of Diabetes Mellitus." A complete, concise and practical review of diabetes was given. After a brief outline of its nature, pathology, incidence, and symptomatology, the speaker offered practical points in determining the threshold of carbohydrate tolerance. Insulin is indicated in any diabetic who cannot remain sugar-free on an adequate diet. The three common views on what constitutes an adequate diet were explained. The method of estimating the daily insulin dosage and the color reactions of the Benedict test on the urine were described.

The simplification of the two subjects, in spite of their thorough presentation by Doctors Templeton and Garrison, was greatly enjoyed by their audience. Lengthy discussions of each paper proved highly instructive.

The regular business followed the scientific program. Dr. I. O. Church of Martinez, county health physician, was unanimously voted a member of the



society. The application of Dr. Clara H. Spalding of Richmond, a former member of the society, was acknowledged and referred to the board of censors, as usual. Mrs. J. W. Bumgarner, wife of our president, sent acknowledgment of congratulations and flowers forwarded on the birth of a daughter. The death of Dr. Joseph T. Breneman of El Cerrito on March 9 was officially reported. The late doctor was the oldest practitioner in the county and a founder of the society. A floral tribute and a letter of condolence to the widow of Doctor Breneman were authorized.

A list of orders to be followed by Metropolitan nurses called to visit the sick of the company before the arrival of a physician, and to be used on their first visit only, was approved by the society after thorough discussion.

J. L. Beard and I. O. Church, both of Martinez, were appointed to arrange the program of the next meeting to be held in their city in April.

The Woman's Auxiliary held their meeting in Richmond on the same date, and were guests of the society at dinner following the meetings.

L. H. FRASER, *Secretary*.



#### FRESNO COUNTY

The Fresno County Medical Society held its regular meeting at the University Sequoia Club March 4, at 8 p. m. Forty members were present.

The minutes of the previous meeting were read and approved.

Dr. A. E. Anderson was appointed chairman of a special committee to investigate the question of hospitalization of patients of moderate means.

Report was made at a special meeting held March 7.

After general discussion by the members of the society the matter was laid on the table.

Dr. John Hudley Scudder of Oakland read a very interesting paper on "Errors in Diagnosis of Appendicitis." He reviewed the different causes for surgical failures.

J. M. FRAWLEY, *Secretary*.



#### NAPA COUNTY

The regular monthly meeting of the Napa County Medical Society was held Wednesday, March 5, at 6:30 p. m. at the Napa State Hospital. Dr. C. E. Sisson, medical superintendent, acted as host and provided a most appetizing dinner, which preceded the business session. Dr. George I. Dawson, president, opened the meeting.

The minutes of the previous meeting were read and approved. Communications were read.

It was moved, seconded and carried, that the Napa County Medical Society adhere rigidly to the fee schedule of the State Compensation Insurance Fund as applied to x-ray pictures, and that the secretary should so notify certain insurance companies who are attempting to lower the rate.

The formation of a woman's auxiliary was discussed, and the wives of members will be invited to attend the next regular meeting of the society.

The business meeting having adjourned, the staff of the Napa State Hospital presented a number of typical mental cases.

Dr. C. E. Nixon, pathologist, presented several interesting postmortem specimens.

Members present were: C. H. Bulson, H. R. Colman, George I. Dawson, E. F. Donnelly, A. E. Chapple, I. E. Charlesworth, C. A. Gregory, C. A. Johnson, Lena Miller, A. K. McGrath, A. McLish, C. E. Nelson, R. S. Northrop, G. W. Ogden, J. Robertson, O. Rockwell, J. B. Rogers, C. E. Sisson, H. W. Vollmer, L. Welti, and George J. Wood.

Visitors present were: Dr. C. E. Nixon, Dr. Toller, Dr. Williams, Mr. Owen Murray, supervisor Napa State Hospital; Mrs. Harvey, superintendent Victory Hospital, Napa; Mrs. M. Davis, matron Napa State Hospital; and Miss Rose Offutt, social service worker

C. A. JOHNSON, *Secretary*.

#### ORANGE COUNTY

The regular monthly meeting of the Orange County Medical Association was held at St. Ann's Inn, Santa Ana, on March 11, the date having been postponed one week due to the invitation of the society to hear Doctors Coffey and Humber's lecture at San Diego on cancer.

Forty-five members were present and a sumptuous turkey dinner was served promptly at 7 o'clock. Our guests of honor were Doctors LeRoy Crummer of Los Angeles, Lyell C. Kinney, president-elect of the California Medical Association, and Mott T. Arnold, councilor of the first district.

Between courses the following business of the society was transacted:

1. The minutes of the last three meetings were read and approved.

2. A report on the Barlow medical library and radio broadcasting was made by Dr. M. W. Hollingsworth. It was suggested that the society take out a patron membership in the Barlow library for this year only, costing \$25. It was voted on and carried. The question as to the weekly radio talks over our local broadcasting station was then discussed, the cost of \$9 for fifteen minutes weekly to be paid by the Madden Pharmacy of Santa Ana. On referring this to the membership it was carried by one vote.

3. The reading of Dr. H. F. Gramlich's application for membership was heard for the first time. The second readings of Doctors H. MacVicker Smith, Robert S. Wade, and E. D. Kilbourne were heard by the society and voted on. All three were taken into membership of the association.

4. The question as to expenses for the Woman's Auxiliary during the meeting of the Southern California Medical Association in Santa Ana in April was discussed. It was moved and carried that the society allow \$25 for the Auxiliary for this occasion.

5. A report of the proposed Southern California meeting was given by Dr. M. W. Hollingsworth, program chairman. Plans for this meeting by his committee and the Woman's Auxiliary were given in detail. The question as to whether our regular April meeting should be postponed on account of the Southern California meeting was discussed, but by vote it was decided to hold our regular April meeting as usual.

Dr. Lyell C. Kinney was then introduced to the members, and gave a very interesting talk on the State Association, stressing three proposed objectives at this time, namely: (a) Incorporation. (b) Basic Science Law. (c) Medical service to those of small salaries.

Dr. Mott H. Arnold, councilor of the first district, was introduced and gave a short talk.

Dr. LeRoy Crummer of Los Angeles gave the principal address of the evening on "Angina Pectoris." It was a very interesting discussion of the subject and was very capably handled by the speaker, who gave many of his personal opinions and experiences on this type of heart disease.

At the end of this paper Doctor Cushman moved that a vote of thanks be extended Doctors Crummer, Kinney, and Arnold for their effort in making this meeting a very decided success. It was unanimously carried.

On motion the meeting adjourned.

HARRY G. HUFFMAN, *Secretary*.



#### PLACER COUNTY

The Placer County Medical Society held its monthly meeting Saturday evening, March 15, in Auburn, President Max Dunievitz presiding.

There were present the following members and visitors:

Members—Doctors Dunievitz, Durand, Woodbridge, C. E. Lewis, Myers, William Miller, Thoren, Mackay, L. C. Barnes, Monica Stoy Briner, Fay, Rooney, and Peers. Visitors—Doctors Morton R. Gibbons, president of the California Medical Association; L. E.



Jones of Roseville, and H. M. Kanner, C. B. Jones, J. L. Fanning, G. A. Foster, E. W. Beach and O. S. Cook of Sacramento.

Dr. Louis E. Jones of Roseville was elected to membership, subject to the approval of the state office.

The guest of honor was Dr. Morton R. Gibbons, who addressed the society on matters pertaining to industrial accident work and other subjects of interest to the profession. Doctor Gibbons explained the main features of the Workman's Compensation, Insurance and Safety Act, stressing the rights of the insured and those of the members of the profession. Doctor Gibbons discussed at length many of the subjects now before the profession and which are being carefully studied by the Council, including the Basic Science Law, social insurance, other forms of health insurance, our state journal, the finances of the state society, and the subject of dues.

At the close of Doctor Gibbons' address these matters were very fully discussed by all members present, and many questions were asked by the members and answered by Doctor Gibbons.

Doctor Mackay discussed the recent appointment by the Board of Supervisors of a milk inspector for Placer County. It was the opinion of the majority of the members present that the action of the board should be upheld.

Doctor Rooney spoke briefly regarding legislation relating to the prescribing of narcotics and alcohol by members of the profession, condemning the present tendency to restrict physicians in their professional work.

Before adjournment Doctor Dunievitz stated that the next meeting would be held in Grass Valley on a date to be announced later. He reported that the speakers of the Grass Valley meeting would be former Nevada County residents now practicing in San Francisco.

ROBERT A. PEERS, *Secretary*.

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#### SACRAMENTO COUNTY

The first regular meeting of the Sacramento Society for Medical Improvement for the year 1930 was called to order by the president, Dr. Gustave Wilson, in the Senator Hotel on January 21. Fifty-three doctors were present.

The minutes of the November 1929 meeting were read and approved.

Dr. F. Gundrum reported the interesting case of a woman who had had a mitral stenosis for twenty-five years and who suddenly developed an auricular flutter following exertion. Digitalis had no effect, but quinidin in small doses, one grain three times a day, increasing by one grain daily, changed the flutter to a fibrillation. A few days later she developed a sudden pain in the abdomen, with numbness, tingling, and cyanosis of both feet. Thrombosis at the bifurcation of the aorta, which this patient had, is a rare condition.

There being no further cases reported, the paper of the evening was delivered by Dr. Alfred C. Reed, professor of tropical medicine at the University of California Medical School. The subject was "Some Medical Problems of the Orient." Doctor Reed had recently traveled through Egypt, Syria, Persia, India, the Federated Malay States, and China, studying the diseases peculiar to these countries, noting their epidemiology, pathology, and treatment. The diseases specially mentioned were amebiasis, leprosy, Billroth's disease, bacillary dysentery, rabies, and sunstroke. The paper was illustrated by lantern slides from the pictures Doctor Reed had taken, which made the talk very interesting. Appreciation of the paper was voiced by Doctors Gundrum and Johnson.

The application for membership from Dr. Lloyd C. Austin was read. This being the first reading no action was taken. Doctor Fanning's transfer was also read.

Doctor Sampson announced the staff meetings at the Sacramento Hospital on the fourth Tuesday each month. Members were urged to attend.

Doctor Hall asked the doctors to report all cases of pneumonia.

It was moved and seconded that the secretary be instructed to inquire about reservations for delegates and alternates from this society to the annual convention of the California Medical Association at Del Monte. Motion carried.

There being no further business the meeting adjourned.

FRANK WARNE LEE, *Secretary*.

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#### SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society was held at the County Hospital in San Bernardino, March 4. The meeting was called to order at 8:10 p. m.

The minutes of the previous meeting were read and approved.

The secretary spoke briefly concerning the present status of the Coffey-Humber treatment of cancer.

The program of the evening was then entered upon:

The Neurological Aspect of Relief of Pain in the Various Parts of the body—Mark Albert Glaser of Los Angeles. Illustrated by lantern slides. Discussion opened by W. A. George of Loma Linda.

The Medical Aspect of Pain—Samuel D. Ingham of Los Angeles. Discussion opened by C. L. Emmons of Ontario.

Luncheon at 10:30 o'clock.

\* \* \*

Owing to the changes in the new constitution the delegates and alternates are now elected for two years, one-half being elected each alternate year. This necessitates the following changes: Dr. W. F. Pritchard and Dr. A. T. Gage for 1930; Dr. F. F. Abbott and Dr. S. B. Richard for 1930-31.

A letter from Doctor Stivers was read concerning a talk on speech defect to be given before the medical society. As it is impossible to reconcile conflicting dates this program will have to be postponed.

The following milk commission has been appointed by the President for the current year: Dr. K. L. Dole of Redlands, Dr. C. I. Emmons of Ontario, Dr. C. F. Whitmer of Colton, Dr. W. A. Taltaval of Redlands, Dr. J. W. Whitsett of Redlands, and Dr. W. W. Fenton of San Bernardino.

Meeting adjourned at 1:30 o'clock.

E. J. EYTINGE, *Secretary*.

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#### SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday evening at eight o'clock, March 6, in the Medico-Dental Club, 242 North Sutter Street, Stockton. This was a joint meeting at which the Seventh District Dental Society were guests.

The meeting was called to order by Dr. H. E. Kaplan, president. The minutes of the previous meetings were read and approved.

Doctor Kaplan introduced Dr. Nathan Sinai, who addressed the society on the subject of "Medical Trends."

The speaker described the effect on the public of the great number of articles relative to medical care in current publications. The effect of these articles is to build up, on a very flimsy basis of facts, a dangerous public opinion as to methods for correcting any defects that may exist in medical care.

Evidences of dissatisfaction with our system of medical care are to be seen among the groups supplying service as well as the public which receives it. Each group seems to have its particular cause or causes for complaint, most of the complaints having an economic basis.

Apparently the widespread dissatisfaction points to inevitable changes in our system of medical care, and



these changes may take either an evolutionary or revolutionary course.

The Committee on the Cost of Medical Care was organized to carry on a comprehensive study of our system of medical care so that any changes which might seem necessary, as a result of study, may be brought about in an orderly and unemotional manner. The committee stresses the fact that no preconceived opinions concerning the future of medical care are held. The committee further asks that any opinions or plans for correcting any conclusions regarding alleged defects in our present system should be held in reservation until its studies have been completed.

The committee proposes to make complete studies of medical facilities in San Joaquin County. The study is to be made through questionnaires, interviews, and analyses of whatever data are available.

From like studies to be made in other parts of the country and from over twenty additional studies of medical care the committee hopes to arrive at some solution of the problem, to the end that all of the people, regardless of their means, may secure adequate and scientific medical care.

The discussion was opened by Doctors Dewey R. Powell, J. F. Doughty, and J. J. Sippy for the medical men, and by Doctors Jerry O'Brien and H. J. McGilvray for the dentists. The paper was further freely discussed by Doctors McGurk, Chapman, Looser, Thompson, S. H. Hall, Walker, D'Amico, Foard, and Dooley.

The president appointed the following special committee, coöperating with the Committee on Cost of Medical Care: Doctors Dewey R. Powell (chairman), McGurk, Chapman, Barnes, Sippy, Doughty, and C. V. Thompson.

Doctor Barnes presented the matter of the Porter Narcotic Bill, now pending before Congress, and moved that the secretary be instructed to send telegrams to each representative and senator at Washington protesting the passage of this bill. Motion was duly seconded and carried.

The meeting was attended by members from the medical society and dental society both. Those present were: Dr. Nathan Sinai, Dr. F. R. Prince, president of the dental society; and eighteen other dentists as guests. Medical members present were: Doctors S. R. Arthur, Blackmun, Broadus, Chapman, Conzelmann, Doughty, Dozier, Davison, Foard, Frost, Gallegos, Goodman, Hammond, Kaplan, Looser, McCoskey, McGurk, McNeil, Marnell, Owens, Peterson, Pinney, D. R. Powell, Rohrbacher, Sanderson, Sheldon, Sippy, Margaret Smyth, C. V. Thompson, Vischi, and Walker.

There being no further business, the meeting adjourned for refreshments and social hour.

C. A. BROADDUS, *Secretary*.

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#### TULARE COUNTY

The regular monthly meeting of the Tulare County Medical Society was held Sunday evening, February 23, at Motley's Café. The meeting was called to order by Dr. H. G. Campbell, president, at eight o'clock. Minutes of the previous meeting were read and approved.

The following were unanimously admitted to membership: R. C. Hill, George B. Dewees, and K. F. Weiss.

Members present: Doctors C. C. Bond, Groesback, A. Bond, Brigham, Campbell, Tourtillott, Lipson, Gilbert, Zumwalt, Seligman, Weiss, Hill, Dewees, and Ginsburg.

Dr. J. C. Geiger of Hooper Foundation, University of California, gave a very interesting address on "Cerebrospinal Fever on the Pacific Coast." The address was illustrated with lantern slides.

A vote of appreciation was expressed by the society to Doctor Geiger for his address.

There being no other business the meeting closed at 9:30 o'clock.

S. S. GINSBURG, *Secretary*.

#### VENTURA COUNTY

The March meeting of the Ventura County Medical Society was held March 11 at the clinic of Ventura County Hospital.

Vice-president W. S. Clark opened the meeting. The members present were: Doctors Coffey, Jones, Patton, Welsh, D. G. Clark, Felberbaum, Schultz, Bardill, Yoakum, Achenbach, Shore, Homer, Smolt.

Doctors W. H. Leake and Claude Davison of Los Angeles were present at guests. The minutes were read and after a correction of the roll, striking out the name Johnson, were approved.

Letters were read from the University of California Medical School, and the Committee on Associated Societies of the State Association.

Doctor Welsh inquired about a uniform fee schedule for the county. Discussion developed the opinion that there is no such schedule in force at present and that none is desired.

The business meeting was then closed and Doctor Clark introduced the speaker of the evening, Dr. William H. Leake. Doctor Leake is a senior attending physician at Los Angeles County General Hospital and is connected with the medical school of the University of Southern California. His subject was "Cardiac Symptoms in Thyrotoxicosis."

Doctor Leake emphasized the fact that abnormal cardiac rhythm is not in itself a contraindication to thyroidectomy. He also described in detail the pre-operative preparation of goiter cases, especially the use of Lugol's solution and digitalis. The use of quinidin in correcting persistent arrhythmia after operation was also well set forth. In conclusion three case histories of interest were read and commented upon. Doctor Leake then answered questions upon hyperthyroidism in general.

Dr. R. M. Jones was appointed by Doctor Clark to arrange the program for the April meeting and the members adjourned.

CHARLES A. SMOLT, *Secretary*.

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#### YOLO-COLUSA COUNTY

A regular meeting of the Yolo-Colusa Medical Society was held at Davis on March 5.

G. H. Hart and H. H. Cole of the Division of Animal Husbandry of the College of Agriculture presented a paper on their studies with the sex-maturing hormone of the pituitary gland (anterior hypophysis). This consisted in a discussion of the research work that has been going on during the last few years on the anterior hypophysis hormone and also folliculin or estrin, a second hormone affecting the genital tract, probably produced in the Graafian follicle.

The work had been done on blood samples of pregnant mares and urine of pregnant women. Demonstrations were also made on immature white rats which had been brought to sexual maturity by the injection of blood and urine from cases in various stages of pregnancy. It showed this to be a very satisfactory biological test for the diagnosis of pregnancy in the early stages in both humans and animals.

Microprojection apparatus was used to demonstrate the changes taking place in the ovaries of the rats. These showed changes from the enlargement of a single follicle to very extensive changes in many follicles, including ovulation, with a demonstration of the ova in the oviduct, depending on the concentration of the hormones in the blood or the variations in the size of the dose from the same sample of blood from mares. The evidence presented showed that in all probability the effect of the anterior hypophyseal hormone was to produce development of one or more Graafian follicles which in turn probably produce folliculin which caused the changes in the uterus and vagina.

A demonstration was also made of the characteristic cell picture from vaginal smears in rats at various stages of the cycle.

In working with spayed mature and immature rats, as compared to nonspayed immature rats, it was

shown that a considerably larger dose of serum (thirty cubic centimeters) was required to demonstrate the presence of folliculin in spayed rats, whereas a single injection of one cubic centimeter of the same serum into unspayed immature rats produced the characteristic hypophyseal hormone changes in the ovary.

The studies showed a varying concentration of the hormone in the blood of a pregnant mare, its first appearance being demonstrated from thirty-seven to forty-two days after pregnancy, as compared to a much earlier appearance in pregnant women. This was followed in the mare by a rapid increase in the concentration between the forty-fifth and eightieth days, followed by a gradual decline to the one hundred and eightieth day, when the ovaries of the injected rats were again comparable in size to the controls.

There was also a discussion of the application of this knowledge to clinical medicine and to animal husbandry.

An article on this work will soon appear in the *American Journal of Physiology*.

The meeting then adjourned to inspect the new Animal Science Building. The several different chambers for the estimation of the basal metabolism of insects and animals of all sizes were shown and explained.

Expressions of appreciation to Doctor Hart and his confrères and thanks for their time and efforts were then given.

W. E. BATES, *Secretary-Treasurer*.

#### YUBA-SUTTER COUNTY

A meeting of the Yuba-Sutter Medical Society was held on February 11 last, and Dr. Hans Lisser of San Francisco gave a very delightful and instructive lecture on endocrines, etc. The lecture was illustrated by lantern slides, and all statistical facts were brought out clearly. There was a full attendance of the society, and a vote of thanks was extended to Doctor Lisser for his lecture and his coming to our meeting.

\* \* \*

At the meeting of the society on March 11, Dr. P. B. Hoffman was elected as delegate and Dr. F. W. Didier as alternate to the California Medical Association House of Delegates.

The meeting was held in the Marysville Hotel and was well attended.

The speaker of the evening was Dr. Albert Rowe of Oakland. His subject, "Food Allergy—Its Control by Elimination Diets," was well appreciated. The subject was a little different from the better understood specialties, and a vote of thanks and due appreciation was given to Doctor Rowe.

The subject was one more or less observed but never taken into the deep consideration it should have had; and the enlightenment caused by Doctor Rowe's lecture will make amateur allergists out of all of us.

F. W. DIDIER.

#### CHANGES IN MEMBERSHIP

##### New Members

*Alameda County*—Benjamin Warren Black.

*Fresno*—Everett Morris, Harry A. Randel.

*Imperial County*—Augustus Hunter Foster.

*Los Angeles County*—Robert James Bowman, Edward E. Hethcock, John Ernest Jackson, Israel Klein, Elbert B. Liddell, Guy Oliver McKeehan, Clarence Eugene Schuetz, Milton J. Tobias, Earl Willson Wells.

*Marin County*—R. Martha Allen.

*Monterey County*—Raymond J. Cluen, Sydney H. Smith.

*Napa County*—John Robertson.

*Orange County*—Ralph Carr Green, Samuel J. Walker, Murray Bates.

*Riverside County*—William E. Gardner, Jesse N. Roe, Harry C. Reynolds, Herman John Wickman.

*San Francisco County*—Horace Gray, Frank Bernard Hand, Chauncey D. Leake, Charles F. Sanborn, Abraham Blackburn Sirbu.

*San Luis Obispo County*—Charles E. Brown, Daniel H. Craig.

*Santa Clara County*—Bertha Stuart Dymont.

*Yolo-Colusa County*—E. Haskins Gray, Oscar C. Railsbach, Rulon S. Tillotson.

##### Transferred Members

Otis A. Sharpe, from San Francisco to San Mateo County.

Louis O. Wallace, from Sonoma to New Hampshire.

Charles H. Lewis, from Los Angeles to San Francisco County.

Hobart P. Shattuck, from Los Angeles to Arizona. Jay Jacobs, from Lassen-Plumas to San Francisco County.

Herbert Q. Willis, from San Joaquin to Orange County.

Clement E. Counter, from San Bernardino to Orange County.

George Franklin Shiels, from San Francisco to San Mateo County.

Henrietta Frederickson, from Los Angeles to Sonoma County.

##### Resignations

*San Francisco County*—Charles E. Taylor, William L. Rogers, Enrique M. Aldana, Paul S. Barrett, William L. Blanck, Paul G. Capps, Victor d'Ercole, Henry L. Holzberg, Thor Lude, Madeline M. Manuel, J. Edward Neville, Maurice W. O'Connell, Eva C. Reid, Max Salomon, W. Francis B. Wakefield, Conrad Weil.

*Los Angeles County*—Kawor Iseri.

##### Deaths

**Beckwith, Ward M.** Died January 15, 1930, age 73 years. Graduate of Columbia University College of Physicians and Surgeons, New York, 1889. Licensed in California 1891. Doctor Beckwith was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

**De Loss, Herbert.** Died December 27, 1929, age 70 years. Graduate of Rush Medical College, Chicago, 1888. Licensed in California, 1892. Doctor De Loss was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

**Leavitt, Edgar Irving.** Died March 7, 1930, age 41 years. Graduate of Cooper Medical College, San Francisco, 1910. Licensed in California, 1910. Doctor Leavitt was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**McArthur, William Taylor.** Died March 11, 1930, age 64 years. Graduate of University of Toronto Faculty of Medicine, Ontario, 1895. Licensed in California, 1895. Doctor McArthur was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

**McClish, Clark Loring.** Died February 17, 1930, age 55 years. Graduate of University of California Medical School, Berkeley, 1904. Licensed in California, 1904. Doctor McClish was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

**Miller, Allan Percy.** Died February 20, 1930, age 50 years. Graduate of McGill University Faculty of Medicine, Montreal, 1905. Licensed in California, 1909. Doctor Miller was a member of the Los Angeles County Medical Association, the California

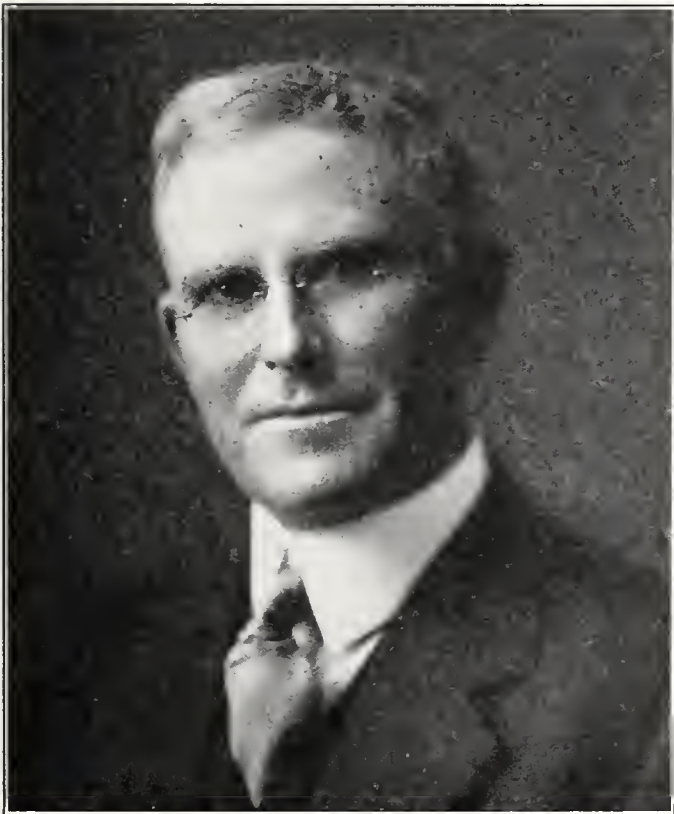


Medical Association, and the American Medical Association.

**Owens, William Dunlop.** Died February 13, 1930, age 51 years. Graduate of Georgetown University School of Medicine, Washington, D. C., 1901. Licensed in California, 1920. Doctor Owens was a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.

**Rubin, Joseph Salem.** Died January 18, 1930, age 30 years. Graduate of University of California Medical School, Berkeley, 1926. Licensed in California, 1926. Doctor Rubin was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

### OBITUARIES



**William Taylor McArthur**  
1866-1930

William Taylor McArthur has gone from us—capable surgeon, orator of native wit, devoted worker for organized medicine, and beloved physician and loyal friend.

Born sixty-three years ago of sturdy Scotch parentage in Ontario, Canada, in an environment of simplicity, sincerity and earnestness, he grew to manhood with these attributes dominating his life. There were no great libraries in the woods of Canada when he was a youth, but there was Burns and Scott and Shakespeare and the Bible, and these few classics were so well mastered in youth that excerpts from the memories of that reading were a never failing source of pleasure to his audiences—public or private.

Doctor McArthur graduated from the Owen Sound Collegiate Institute in 1891 and from the medical department of the University of Toronto in 1895. Following his graduation he located in Los Angeles in 1895, and remained there with the exception of time for postgraduate study in London and in Edinburgh, from the university of which latter city he received the degree of F. R. C. S. In 1901 he resumed practice in Los Angeles until his death on March 11, 1930.

From 1907 to 1911 he was Professor of Surgical Anatomy in the University of Southern California.

He was a lecturer on artistic anatomy in the Los Angeles School of Art and Design. For many years he was an attending surgeon at the Los Angeles General Hospital. He was a member of many clubs, civic and social organizations, his attendance at any being always hailed with pleasure by his fellows.

But it was in organized medicine that Doctor McArthur took the greatest interest and perhaps his greatest satisfaction so far as civic or public life was concerned. He knew the need of organization and he believed in its future. For more than twenty years there was no time when the name of W. T. McArthur did not appear in the councils of the county, state or district medical organizations.

He served as a councilor of the Los Angeles County Medical Association for many years and was a member of its board of trustees from the organization of that body until his death. After having served as councilor of the State Association for many terms, he was elected president of the California Medical Association for 1926-1927.

Doctor McArthur's usefulness in these important positions was due to his mental poise and judicial mind. He gathered facts and viewed them from all angles, and his final decision was always deliberate and judicial. Nobody questioned his sincerity; none doubted his honesty. With him patience worked the perfect work. No matter how serious or how important the matter, Doctor McArthur could always see a humorous side that brought a laugh or a smile at some solemn stage of the proceeding. In private conversation and in public address he was noted for his wit, but it was ever wit without a sting.

In 1904 Doctor McArthur was married to Mary D. Smith of York, Pennsylvania, who survives him. The McArthur home has been known for its hospitality to the medical profession. Mrs. McArthur has sympathetically cooperated with her husband's work in a most devoted manner. Four children were born: Mary, Elizabeth (Mrs. Henry Duque of Cambridge, Mass.), William T. Jr., and Duncan. Four brothers survive: The Honorable Robert T. McArthur of Moorfield, Ontario; James McArthur of Ontario, Dr. Peter R. McArthur and Dr. Duncan D. McArthur of Los Angeles.

In his professional life Doctor McArthur was individualistic. His patients were his people. He was a "doctor of the old school"—a "Weelum McClure" of McLaren's "Bonnie Briar Bush." Indeed, James Main Dixon and others referred to him always as "Weelum." What finer tribute could be paid a physician? Who could crave one higher!

Now is the stately column broke,  
The beacon light is quenched with smoke,  
The trumpet's silver sound is still,  
The warder silent on the hill.

**Joseph Truesdale Breneman**  
1849-1930

In the death of Doctor Breneman the Contra Costa Society has lost one of its oldest and most loved and respected members.

Doctor Breneman practiced for fifty of the eighty-one years of his useful life, thirty-eight of these active years being spent in California.

He was born on a farm in Hancock, Ohio, on January 23, 1849 and, following the usual preliminary public school education, he received his medical degree from the University of Iowa in 1879. Two of his classmates survive him; one, Dr. P. K. Waters of Watsonville visited him during his last illness.

Doctor Breneman was respected by his fellow physicians and especially by the members of the Contra Costa County Society for his strict adherence to the ethics of medicine; for his keen mind, and his constant interest in the progress of medicine and the world.



## THE WOMAN'S AUXILIARY OF THE CALIFORNIA MEDICAL ASSOCIATION\*

### CONTRA COSTA COUNTY

The second meeting of the Woman's Auxiliary to the Contra Costa Medical Society was held Tuesday evening, March 11, at the Richmond Conservatory of Music, 906 McDonald Avenue, Richmond.

The meeting was called to order by Mrs. J. M. McCullough, president.

The minutes of the previous meeting were read and accepted.

The president appointed the following chairmen:

Membership—Mrs. H. L. Carpenter (telephone, Richmond), Mrs. P. C. Campbell (telephone, Martinez), and Mrs. I. O. Church.

Entertainment—Mrs. W. E. Cunningham.

Philanthropy—Mrs. A. H. Beede.

Education—Mrs. N. L. Fernandez.

Mrs. I. O. Church was appointed chairman of arrangements for the next meeting.

The possible activities of the auxiliary were discussed.

There being no further business the meeting was adjourned.

HELEN WEIL, *Secretary*.

### LOS ANGELES COUNTY

The first regular meeting of the Woman's Auxiliary of the Los Angeles County Medical Association was held on Thursday afternoon, February 20, in the assembly hall of the Friday Morning Club building, Mrs. James F. Percy, president, presiding. Mrs. Martin G. Carter, secretary-treasurer, read the minutes of the former gathering.

Mrs. Nell Lockwood Josephs added to the pleasure of the occasion with several songs, after which the president, with her usual grace, introduced the speaker of the afternoon, Dr. Percy T. Magan. In effect, Doctor Magan summarized the function of the Woman's Auxiliary as that of helping the physician to do the important things that he is unable to do himself because of the stress of his vocation. The conscientious doctor spends all his time in studying the problems of how he can prolong life, preserve health, prevent suffering, and thus adds to human happiness, which is so tremendous a problem that the doctor has little time for anything else.

And yet there are important problems that confront the doctor quite as much as any other person—problems that concern his own profession directly. Social problems and situations, things political, religious activities that form the warp and woof of our civilization. And it is in these very things that the Woman's Auxiliary—the wives, sisters, and daughters of the physician, who know and appreciate his needs more than others in the community—can be helpful.

The consummation of this combination should mean everything to the welfare of the community as well as to the welfare of the physicians in the community. For, after all, their aims and objects and ambitions are the same.

The regular meetings of the Woman's Auxiliary will be held on the third Thursday of every second month, the next meeting being on April 17 in the assembly hall of the Friday Morning Club building.

CORA YOUNG WILLIAMS,

*Publicity Chairman.*

\* As county auxiliaries to the Woman's Auxiliary of the California Medical Association are formed, the names of officers should be forwarded to the state secretary-treasurer, Mrs. R. A. Cushman, 632 North Broadway, Santa Ana, and to the California Medical Association office, Room 2004, 450 Sutter Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed for publication in this column. See advertising page 6 of each issue for state and county officers.

**Executive Board Meeting of the Woman's Auxiliary of the Los Angeles County Medical Association.**—Mrs. James F. Percy called the meeting to order at 1:40 p. m. February 20 at 940 South Figueroa Street.

Mesdames Carter, Percy, and von Wedelstaeldt were present.

Moved, seconded, and carried that bills amounting to \$102.95 be approved as paid.

After a general discussion of plans for future meetings, there being no further business to come before the board, the meeting adjourned after having approved the above minutes.

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**Regular Meeting of the Woman's Auxiliary of the Los Angeles Medical Association.**—Mrs. James F. Percy called the meeting to order at 2:45 p. m. February 27 at 940 South Figueroa Street.

The minutes of the organization meeting on December 27, 1929, were read and approved.

The standing rules of the auxiliary, as adopted by the Executive Committee, were read by the secretary.

After the president's announcements, Mrs. Nell Lockwood Josephs sang.

Dr. Percy W. Magan, the speaker of the afternoon, chose for his subject "The Hand That Holds the Doctor's Heart Is the Hand That Moulds the Healing Art."

After the meeting adjourned, tea was served and a social hour enjoyed.

The following signed as additional charter members:

#### MESDAMES

Samuel M. Alter  
E. W. Ames  
Harry E. Anderson  
Howard Andrews  
Arthur J. Annis  
Edward D. Anthony  
Francis L. Anton  
Edwin V. Askey  
John M. Askey  
Thomas C. Austin

Robt. V. Baker  
R. W. Baker  
A. J. Balkins  
H. O. Barnes  
H. D. Barnard  
Roger W. Barnes  
Samuel G. Bay  
Horace R. Beck  
Ben M. Behr  
Elmer A. Belt  
Chas. L. Bennett  
Curtis Bland  
Peter H. Blong  
A. E. Boland  
Vincent Bonfiglio  
Oliver P. Bourbon  
W. A. Boyce  
Walter H. Boyd  
H. B. Breitman  
A. Brockway  
Page Brown  
Chas. E. Browning  
Harry E. Bryant  
Richard O. Bullis  
James H. Burgan  
Lloyd A. Burrows  
Frank Byington

Clayton C. Campbell  
John Carling  
J. K. Carson  
Miss Kingsetta Carson  
William F. Carver  
Chas. R. Caskey  
R. W. Cavell  
Rafe B. Chaffin  
Ben H. Chamberlain  
H. H. Chamberlin  
H. L. Charles  
Raymond E. Chase  
A. C. Christensen  
Fred B. Clark  
R. M. Clark  
Harry W. Coffin  
George L. Cole  
A. B. Cooke  
John C. Copeland  
Carl C. Cowin  
Jay J. Crane  
Lawrence L. Craven  
Leonard E. Croft  
J. Carl Cummings

R. A. Davis  
Claude E. Davison  
Robert V. Day  
James R. Dean  
Richard Dewey  
Ed. W. Dougherty  
Paul S. Dougherty  
C. O. Driver  
R. M. Dunsmoor

Earl Eames  
Philip J. Edson  
H. D. Edwards  
Jos. T. Edwards  
Newton G. Evans  
P. B. Exelby

Roy E. Fallas  
Franklin G. Farman  
R. M. Farnham  
James J. Farrell  
W. Max Fearon  
Louie Felger  
P. Ashley Foster  
Julius Frankl  
H. J. Friesen  
J. Frank Friesen  
Chas. E. Futch

C. R. Gailmard  
Peter A. Gallant  
W. Morton Gardner  
Donald B. Garstang  
Albert C. Germann  
O. E. Ghrist  
Dozier H. Gibbs  
Jacques S. Gilbert  
Mark A. Glasser  
Scott D. Gleeten  
Leon D. Godshall  
Jos. Goldstein  
Oscar Goodley  
A. Gottlieb  
Ben E. Grant  
James Green  
L. H. Greenbaum  
Sutton H. Groff  
Robert E. Grogan  
Lowrie Grow

Clemen Hamer  
Clyde E. Harner  
Trustin M. Hart  
P. F. Haskell  
R. F. Hastreiter  
Ed. W. Hayes  
John R. Haynes  
Atlas T. Hembree  
Francis C. Hertzog  
O. C. Hester  
Daniel L. High  
M. R. Hill  
R. M. Hippach  
W. W. Holley  
John H. Hooval  
Arthur D. Houghton



- John A. Jackson  
Robert J. James  
Joseph J. Jelineck  
Simon Jesberg  
Russell A. Jewett  
Elmer H. Johnson  
Archie A. Jones  
D. N. Jones  
I. H. Jones  
I. W. Jones  
Louis Josephs  
Herbert Judson

Julius Kahn  
Benjamin Katz  
Louis A. Kempff  
Raymond W. Kelso  
Norman J. Kilborne  
William F. Kroener

J. Mark Lacey  
Wyant La Mont  
Eric E. Larson  
William O. Leach  
William H. Leake  
Lawrence E. Lepper  
Silas A. Lewis  
C. A. Lindquist  
Harry C. L. Lindsay  
J. L. Linn  
Henry H. Lissner  
Fred Loring  
Charles Le Roy Lowman  
James B. Luckie  
Le Val Lund

Granville MacGowan  
Ernest MacLeod  
William F. McCool  
John L. McDaniels  
Ralph W. McKebby  
A. E. Mack  
George E. Malsbary  
George D. Maner  
M. Lee Martin  
E. Signe Maxson  
E. M. Miller  
Harry A. Miller  
Miss Verda C. Miller  
Hyman Miller  
L. L. Miner  
Oliver M. Moore  
Ross Moore  
R. J. Morrison  
H. J. Movius  
H. Wallace Murray

Arthur N. Nelson

Robert E. O'Connor  
Thomas J. Orbison  
Frank M. Otto  
G. R. Owen

P. G. H. Pahl  
Wilbur B. Parker  
George Parrish  
Harold E. Peterson  
Charles E. Phillips  
M. L. Pindell  
I. E. Pottinger  
Bonnie L. Pritchett

Paul A. Quaintance

R. E. Ramsay  
Howard F. Rand  
Rankin S. Reiff  
Louis Reinard  
Sidney M. Reiser  
Oscar Reiss  
Lewis D. Remington

ELLA R. CARTER (Mrs. MARTIN G. CARTER),  
Secretary.
- Francis C. Renfrew  
Louis G. Reynolds  
Fredrick A. Rhodes  
John H. Rindlaub  
Frank O. Ringnell  
F. W. Rinkenberger  
Clinton Roath  
Aaron Rosanoff  
Eric A. Royston  
E. H. Ruediger

Ralph William Schaeffer  
George F. Schenck  
Phillip E. Schmidt  
Moses Scholtz  
Arnold Scholtz  
LeRoy O. Schultz  
Edwin G. Schultz  
Raymond L. Schultz  
D. Z. Schwartz  
A. J. Scott, Jr.  
Paul K. Sellew  
Francis B. Settle  
Charles L. Sexton  
James H. Seymour  
B. H. Sherman  
Leroy B. Sherry  
Charles Shickle  
O. F. Shipman  
Harlan Shoemaker  
Leon Shulman  
John R. Silverthorn  
J. Morris Slemmons  
Orville J. Sloan  
E. P. Smart  
Mark H. Smith  
Myrtle M. Smith  
Grant G. Speer  
H. Waldo Spiers  
Karl P. Stadlinger  
Morris Stark  
George M. Stevens  
C. G. Stivers  
Lionel A. B. Street  
Charles T. Sturgeon  
C. N. Suttner  
Miss M. D. Suttner  
C. F. Swanson  
Louise D. Sweet  
William A. Swim

L. E. Thayer  
Roy E. Thomas  
George Thomason  
C. E. Thompson  
Raymond C. Thompson  
Vernon P. Thompson  
Milton Tobias  
Clarence Toland  
J. V. Trainer  
Leslie D. Trott  
Florence Turnquist

J. E. Vallee  
Richard H. Van Denburg

Dean Q. Waddell  
Mary E. Walker  
Ruth S. Ward  
J. W. Warren  
Leigh F. Watson  
John C. Webster  
Alfred H. Weitkamp  
S. H. Welch  
Walter F. Wessels  
Henry G. Westphal  
Norman H. Williams  
William W. Worster  
Clifford A. Wright  
George A. Wright

A. H. Zeiler

The organization meets once each month, and it is planned to hold the meetings in private homes, the members feeling that in this way a spirit of mutual friendliness is engendered. The next meeting will be held with Mrs. F. H. Patterson.

Mrs. DEXTER A. BALL, *Secretary*.

SAN BERNARDINO COUNTY

The meeting of the Woman's Auxiliary of the San Bernardino County Medical Society was called by the president.

The secretary read the minutes of the previous meeting.

The treasurer's report was read and accepted.

Letters from Mrs. Jean F. Rogers, state president, Mrs. R. A. Cushman, state secretary, and from the Committee on Associated Societies of the California Medical Association were read by the secretary.

Mrs. Emmons suggested that notices of meetings be sent to the State Association with the notices of the county medical society if agreeable to the county society secretary.

Motion was made by Mrs. Walter Pritchard that the delegates to the state meeting remain as elected at the last meeting.

Dr. Belle Wood-Comstock of Los Angeles gave an informal talk on the work accomplished by organized medical women of Los Angeles. Their aim is to educate women whose lack of fundamental knowledge of anatomy and physiology make them an easy subject for quacks. During the six years that the medical women have had charge of the public health section of the women's clubs remarkable progress has been made in health education of woman, prejudices removed, and interest awakened among a very large group.

Dr. Wood-Comstock pointed out that the Woman's Auxiliary might follow a similar line of work in connection with the various women's clubs.

We were then entertained by three delightful and amusing readings by Priscilla Gage.

The meeting adjourned. After a social half-hour members of the auxiliary joined the doctors at the hospital for refreshments, which were presided over by the hostesses, Mrs. Richard, Mrs. Tisinger, and Mrs. Mulvane.

ETHEL E. CURTISS,  
*Secretary*.

UTAH STATE MEDICAL  
ASSOCIATION

- H. P. KIRTLEY, Salt Lake City.....President
- WILLIAM L. RICH, Salt Lake City.....President-Elect
- M. M. CRITCHLOW, Salt Lake City.....Secretary
- J. U. GIESY, 701 Medical Arts Building,  
Salt Lake City.....Associate Editor for Utah

COMPONENT COUNTY SOCIETIES  
CARBON COUNTY

One of the outstanding events of the past month in medical circles was the meeting and banquet of the Carbon County Medical Society held at the Rotisserie Inn, Price, February 25. A general invitation to the members of all other county societies was extended by mail, and was responded to to a large extent.

The scientific program was given by Doctors Howard Fleming and George Pierce, both of San Francisco, California.

Doctor Fleming's paper was on the "Treatment of Head Injuries," and Doctor Pierce's paper was on "Treatment of Hand Injuries." Both were illustrated with lantern slides.

The banquet was a fitting accompaniment to an excellent program, and the entire occasion was en-

ORANGE COUNTY

The Orange County Auxiliary held its third meeting at Mrs. Cushman's home on March 4, with the state and county secretaries assisting the hostesses. Dr. K. H. Sutherland, head of the County Health Department spoke on the subject of "County Health Administration."

A committee on entertainment was appointed to arrange a program for the entertainment of the women relatives of physicians who attend the Southern California medical convention to be held in Santa Ana April 4 and 5.

After the formal program, tea and coffee were served and an hour of sociability was enjoyed. There were twenty-eight members present.

joyed by all those present. In a sense, it was a get-together meeting and, therefore, doubly enjoyable. Salt Lake County Society came down in a special car and returned the next morning.



#### SALT LAKE COUNTY

A report of the committee regarding a communication from the Salt Lake General Hospital asking for the sentiment of this society in respect to professional cards being allowed in the year book of this institution was made. It was the sense of the committee that names of the doctors who would contribute to the magazine fund be printed in one page of the advertising section of that magazine. J. P. Kerby moved that the report be accepted. Seconded and carried.

The report of the board of censors on the application of J. M. Schaffer was to the effect that the applicant be notified to apply to the nearest component society of the Utah State Medical Association.

The applications of Maurice Gordon and J. R. Wherritt were read and given to the board of censors for investigation.

The applications of Mildred Nelson and Orin Ogilvie were favorably reported upon by the board of censors, and both were unanimously elected members of the society.

F. M. McHugh took the chair and announced that on February 24 there would be a dinner meeting at the Newhouse Hotel at 7 p. m.

The meeting was adjourned at 10 p. m.

\* \* \*

The Salt Lake County Medical Society held a banquet at the Newhouse Hotel on Monday, February 24.

The meeting was called to order at 7 p. m. Fifty-three members and six visitors were present.

The program was as follows:

The Problems and Principles of Reconstructive Surgery—George Pierce, San Francisco, California.

Peptic Intracranial Complications—Howard Fleming, San Francisco, California.

At the close of the scientific program, President M. M. Nielson announced that on the following evening Doctors Pierce and Fleming would talk before the Carbon County Medical Society at Price. A special car would leave the Denver and Rio Grande station at 7:30 a. m. for Price, and would return at 10:30 the following morning. Members of the society were urged to join the excursion to the Carbon County Medical Society meeting.

The meeting adjourned at 10 p. m.

BARNET E. BONAR, *Secretary*.



#### UTAH COUNTY

On February 12 the Utah County Medical Society held a meeting. George A. Cochran of Salt Lake City was the speaker. The subject Doctor Cochran spoke on was "Diagnosis of Heart Lesions and the value of the Electrocardiogram in Same."

A series of electrocardiographs of the normal and pathological hearts was shown by lantern, and explanations of the same were given by Doctor Cochran.

Mr. Corsaw of the Pioneer Service Company took a short time to sketch the history and methods of attacks, and position of his company in the field of collecting accounts.

The second meeting of the County Medical Society was held February 26. Dr. L. Oaks was the speaker. He spoke on the subject, "Review of Clinical and Therapeutic Features of the Ear, Nose, and Throat Practice of Interest to the General Practitioner."

A motion was passed to appoint a committee to investigate proposed legislation in Congress to further control and hamper the medicinal use of narcotics, and if justified by the findings to wire the senators on the question.

J. L. AIRD, *Secretary*.

#### WEBER COUNTY

At the regular county society meeting held the evening of February 26, Dr. G. W. Pierce of San Francisco, California, addressed the Weber society on the subject of "Reconstructive Surgery." The lecture was illustrated with lantern slides, and was greatly enjoyed by the members present.

Dr. Clark Rich writes from Vienna, Austria, that he is greatly enjoying his postgraduate work in that city.

Dr. M. J. Seidner intends to sail for Europe the forepart of April for a few months of postgraduate work.

CONRAD H. JENSEN, *Secretary*.

#### UTAH NEWS

The Holy Cross Hospital Clinical Society held its February meeting at the hospital the night of February 17. The following papers were presented:

Volkman's Contracture, L. N. Ossman. Osteomyelitis of the Vertebra, L. F. Hummer. Report of Meningitis, Doctor Walker. Death from Tonsillectomy, F. B. Bailey.

\* \* \*

The recent meetings of the Academy of Medicine which meets each Thursday have presented the following programs on the specified dates:

February 13—Arteriovenous Aneurysm, Dr. George Middleton. Spastic Colitis, X-Ray Diagnosis and Treatment, Dr. R. Tyndale. Differential Diagnosis of Chest Conditions, Doctor Jellison.

February 20—Review of Wilkie's Article on Abdominal Surgery, Dr. L. A. Stevenson. Review of American College of Physicians Meeting in Minneapolis, Dr. La Barge.

March 6—Cardiac Neurosis and Irritable Heart, Doctor Viko. Spastic Colitis, Doctor Sugden.

Natural Gas Leakage Easily Detected by Odorizing with Ethyl Mercaptan.—The detection of leakage is a recognized problem in the safe and economic distribution and use of natural gas. That type of fuel gas is practically odorless and therefore lacking in the property of indicating significant leakage by the sense of smell, the most valuable and widely used means of apprising gas employees and consumers of leaks of the more odorous types of fuel gases. Physically and chemically operated detecting devices have been developed and are of assistance in making organized leak surveys and in investigating suspected leakage, but none of these meets the necessity of spontaneously indicating the location of leakage at the time of occurrence.

The United States Bureau of Mines, at its Pittsburgh Experiment Station, has been interested in the detection of leakage of fuel gases for a number of years, and particularly the leakage of types of gas that do not possess indicating or warning properties as odor or irritation. In view of this interest and also the recognized value of the odor for detecting leakage of the more odorous types of gases, the bureau studied the possibilities of adding small amounts of highly odorous substances to odorless types of fuel gas, as blue water gas and natural gas, for the purpose of imparting an odor to the gas that would be readily perceptible and thereby serve as a means of detection.

The results of the previous studies indicated that ethyl mercaptan was a very promising odorizing substance for natural gas. This has recently been substantiated by tests made in distributing systems of the Union Gas and Electric Company. The ethyl mercaptan was found to travel through the lines with the gas and, due to its powerful odor, was not only efficacious in giving warning of leaks in consumers' house piping, but made apparent underground leaks in distributing and service lines. In some cases leaks in the distributing systems and service lines were detected by persons walking or riding along the street.—*United States Department of Health*.



## MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

### NEWS

**Doctor Lokrantz Receives High Decoration From the King of Sweden.**—Dr. Sven Lokrantz, medical director of Los Angeles city schools, has received a very high decoration from the King of Sweden on account of his health work for the children of California and in a lesser degree for the children of Sweden. The decoration is Knighthood of the Royal Order of Vasa, first class, which has been given out to only a very few men in this country.

Doctor Lokrantz, who is now an American, came to the United States as a young man at the age of eighteen. He was born in Stockholm, Sweden. Some time ago Doctor Lokrantz was partly instrumental in sending an ambulatory clinic to the needy children of northern Sweden. This clinic is now going from school to school caring for the pupils' eyes, ears, nose, throat, and teeth. Similar clinics were invented by Doctor Lokrantz for Los Angeles children, and many thousands of children have been aided here.

The Los Angeles School Health Department is rated as the leading department of its kind in the United States.

Mr. G. W. Olson, superintendent of the California Hospital, had been officially requested by the Swedish Embassy to present this decoration to Doctor Lokrantz.—*Bulletin of the Los Angeles County Medical Association*, March 6, 1930.

**Metabolic Clinic at Carmel.**—Dr. R. A. Kocher, director of the Grace Deere Velie Metabolic Clinic now being completed in Carmel, states that he hopes to have the clinic open by the time the Annual Meeting is held at Del Monte. In any event if not open, it will be ready for the members to visit and they will be shown through gladly.

**Lane Medical Lectures, May 5-9, 1930.**—Charles R. Stockard, M. D., Ph. D., Sc. D., Professor of Anatomy at Cornell University Medical School, New York City, will deliver the Lane Medical Lectures for the year 1930 at the Stanford University Medical School, San Francisco, California, on the following dates:

May 5.—Medical and Biological Aspects of Constitution.

May 6.—Germinal Constitution.

May 7.—Developmental Constitution.

May 8.—The Interplay of Inheritance and Environment in Constitution.

May 9.—Postnatal Reactions and Periodic Changes in Constitution.

Doctor Stockard will also give a lecture at Stanford University on Wednesday, May 7, at 4:15 p. m., on "Structural Types in Animals and Men."

**Doctor Rixford Honored.**—On March 27, ceremonies were held honoring Dr. Emmet Rixford, who became emeritus professor of surgery in Stanford University Medical School.

Surgeons of the colloquium of the Stanford School met at a luncheon on that day, when the new title was conferred.

Doctor Rixford served for several decades on the school staff.

**San Francisco Pathological Society.**—The regular meeting of the San Francisco Pathological Society was held on Monday, March 3, in the auditorium of St. Mary's Hospital, Hayes and Stanyan streets, at 8 p. m. The following program was presented:

Carcinoma of Gall Bladder—E. M. Smith.

Sarcoma of Male Breast—W. M. Dillon (by invitation).

Four Cases of Primary Lung Carcinoma, Chondrosarcoma of the Heart—F. Proescher.

Chronic Coccidioidal Dermatitis—H. E. Miller.

Chorionic Epithelioma—D. S. Pulford.

Multiple Myeloma—W. T. Cummins.

Members who have not paid their dues for 1929 (which is the sum of one dollar) are requested to forward them to the secretary. The dues for 1930 are now payable.

**Meeting of Southern California Medical Association.**—The eighty-second semiannual meeting was held in the Knights of Pythias Hall in Santa Ana on Friday and Saturday, April 4 and 5.

In addition to articles by well-known southern Californians, papers were presented by distinguished guests from other sections.

Dr. Alfred W. Adson, chief of the department of neurological surgery at the Mayo Clinic, spoke on "Indications for Sympathectomy."

Dr. William Dock of San Francisco reported the results of his latest studies on digitalis.

Dr. J. Herman Wylie, chief of the medical department of the Taylor Memorial Hospital at Paoingfu, China, spoke on "Western Medicine in China."

**California District of the American Association of Hospital Social Workers.**—The organization of the California District of the American Association of Hospital Social Workers has recently been completed and the following officers elected: Evelyn Phelps, chairman (Pacific Branch, American Red Cross); Marguerite Spiers, vice-chairman (Berkeley Health Center); Florence Swan, secretary (Baby Hospital, Oakland); Mrs. Beulah Spunn, treasurer (Alameda County Health Center).

The California district consists of two groups which center about San Francisco and the bay region and Los Angeles County and San Diego. The district officers will rotate north and south yearly. Miss Alice Kratka, Pasadena Dispensary, is chairman of the southern group.

The preliminary work of organizing was accomplished through the efforts of the California Association of Medical Social Workers with its branches in both northern and southern California and through a group of medical social workers in Alameda County hospitals and health centers and the hospital workers of the American Red Cross at Letterman General Hospital, San Francisco, and United States Naval Hospital, Mare Island. The last named groups had been meeting with some degree of regularity for a year and had been greatly assisted by a medical advisory committee consisting of the following physicians: Dr. B. W. Black, superintendent, Highland Hospital, Oakland, California; Dr. William Dock, Stanford University Hospital; Dr. Edward Glaser, State Health Department; Dr. Frank Kelly, Berkeley Health Center and University of California; Dr. William P. Lucas, University of California Hospital; Dr. Ralph Seem, superintendent, Stanford University



Hospital; Dr. William Shepard, Welfare Department, Western Division, Metropolitan Life Insurance Company.

It is the aim of the California district to help promote higher standards of social case work with patients, to encourage training facilities, and through contact with other districts in the United States to keep in touch with recent developments in technique.

The first hospitals in this country to recognize the need of hospital social service were Johns Hopkins Hospital and the Massachusetts General Hospital, the latter of which will this year celebrate the twenty-fifth anniversary of its establishment. In 1920 the American Association of Hospital Social Workers first came into existence. It has twelve districts and maintains both an executive and an educational secretary. During the past few years much work has been done in planning courses of training for medical social workers in connection with universities and affiliated hospitals, the most recent of which are the University of Chicago, Tulane University in New Orleans and Western Reserve in Cleveland. Two general meetings are held annually, one with the National Conference of Social Work and the other with the American Hospital Association. The California District will meet on May 16 at Santa Barbara as a kindred group of the California Conference on Social Work.

## CORRESPONDENCE

### Subject of Following Letter: A Woman's Medical College in China, and Its Needs

The Hackett Medical College for Women (the only one in China), located in Canton, a city of a million and a half, was established thirty years ago by Dr. Mary Fulton. Since then it has graduated 162 physicians, many of whom have become brilliant surgeons. The college and hospital (120 beds) have been provided, as need arose, by philanthropic Americans. Between 2000 and 2500 patients are annually cared for in the hospital. Over 10,000 are treated annually in the dispensary and between 20,000 and 25,000 outpatients are visited each year. In the Nurses' Training School the course is three and one-half years. The medical college requires seven years. Two preparatory years are devoted to botany, zoölogy, biology, physics, mathematics, and history of the medical sciences. Then four years of regular college work and, finally, an intern year. Both college and hospital are self-supporting, and yet fully one-half the patients treated are given free service, because of their poverty.

The unrest in China during recent years has increased the demand for service and, at the same time, has reduced the income of the college. The organization has been unable to purchase many of the really essential items of equipment. For instance, an x-ray machine is very much needed. Doctors Leung Ngai Man and Miriam Bell (the former, professor of gynecology, the latter, of pediatrics) are doing special work in this country.

They wish to appeal to physicians to contribute equipment which, for one or another reason, they are no longer using; and which is in good mechanical condition and worth the cost of transportation to China. Among equipment most needed might be mentioned: An x-ray machine; a fluoroscopic screen for same. Electric otoscopes. Electric refrigerator for preserving biologicals in the tropics. Electric operating lamp, shadowless. Sphygmograph and/or polygraph. Sphygmomanometers, and many other pieces. If any reader is willing to assist so notable a work, please correspond with Dr. Miriam Bell, 1264 N. Twenty-third Street, Philadelphia, Pennsylvania, or with Dr. John C. King, 990 Atchison Street, Pasadena, California.

JOHN C. KING.

(Editor's Note: Dr. John C. King was president of the California Medical Association in 1910.)

## CLIPPINGS FROM THE LAY PRESS

The following clippings deal with the Los Angeles County General Hospital.\* The first clipping is an excerpt from an article entitled "Supervisors Settle Row Over Hospital," printed in the Los Angeles *Examiner* of March 4, 1930:

"Friction between members of the Board of Supervisors over the cost of the new acute unit of the General Hospital, now under construction, came to a head yesterday. . . .

"... Upon the suggestion of Supervisor Frank L. Shaw, seconded by Fred T. Beatty, the supervisors unanimously agreed to continue the employment of the Allied Architects with the proviso that Supervisor Graves and County Architect Karl Muck attend all the deliberations of the architects and join in their discussions.

"It was also voted that the Allied Architects, who drew the original plan, should not 'plan a hospital for indigent poor that would be better and more perfectly appointed than the Biltmore or the Ambassador hotels. . . .

"... Supervisor Beatty stated that the board has invested \$792,967 in the Allied Architects and that they should be permitted to finish the work they began. He proposed, however, that Supervisor Graves and the county architect should have a voice and vote in all the deliberations of the Allied Architects. The supervisors also went on record to have the architects file with the board all changes and estimates of cost."

\* \* \*

The following is an excerpt from an editorial (compare it with the last paragraph in the previous item) entitled "General Hospital Costs," printed in the Los Angeles *Times* of March 2, 1930:

"... The incident has served one good purpose in bringing to public attention the desirability of such expert and disinterested services as are being given the General Hospital project by the board of architects. . . . The county is exceedingly fortunate to have these men on the General Hospital job and the Supervisors should keep them there till the last brushful of paint is applied to the completed structure."

\* \* \*

The following is an excerpt from an article entitled "Board Battles Over Hospital," printed in the Los Angeles *Times* of March 4, 1930:

"... The hospital situation first came to public attention two weeks ago when Supervisor Graves, chairman of the Building Committee, pointed out that under the then-existing specifications the estimate for the completed building had risen from an original \$11,000,000 to \$16,000,000. . . .

"... 'We have already paid the architects more than \$600,000,' said Supervisor Shaw, who added that if the unit were built according to present specifications, it would be 'the finest hospital in the United States.' He pointed out, however, that economy is more to be desired than the 'finest hospital in the United States,' and de-

\* See also editorial on Construction Costs of Los Angeles County General Hospital in this issue of the California and Western Medicine.



The new unit of the Los Angeles County General Hospital. The photograph from which this cut was made was taken on December 26, 1929.



clared that the ultimate cost cannot be brought within the original estimate except by entirely rewriting the specifications for all the work remaining to be done. . . .

"... Supervisor Graves who, as chairman of the building committee, is the Supervisors' official representative in the construction of the hospital unit, replied that he had 'lost faith in the Allied Architects.'

"Six months ago they started rewriting specifications,' Graves continued. 'I objected and since then I have not been invited to their meetings, nor have I been advised when they were meeting.' . . .

\* \* \*

The following excerpt is from an article entitled "Hospital May Cost Extra Millions" from the Los Angeles Record of February 20, 1930:

"... Here are some of the 'extravagant refinements' which Supervisors Graves and Shaw say must go:

"More than 5000 metal doors, to cost more than \$700,000. Birch doors will do quite as well, it is claimed, and will cost \$35, instead of more than \$100 apiece.

"Stainless steel' for the bottom rail of the door frames, the last word in exquisite equipment.

"One million three hundred thousand dollars worth of 'albarene,' an acid-resisting soapstone which it is proposed to use not only in the laboratories, but on the roofs and stair treads and, in a few instances, in the ceiling. This item could be cut to at least \$200,000, the two belligerent supervisors now think.

"Fancy metal work, marble and tile. . . .

"... Supervisor Graves has charge of the county's building operations. Supervisor Shaw, who has charge of operating the hospital, says he wants to cut the cost of building so that he can keep the 'overhead' of operating down.

"I can do a lot of things for the poor of Los Angeles County," he said, 'with the interest on \$6,000,000.

"With the lower cost we can give the patients the same comforts and the same service that we can with the higher.'

"The new hospital, with its 2400 beds, will be completed and ready for use December 31, 1932, according to present plans. It is being paid for out of tax levies.

"Down to date the architects have received in fees on the big building \$631,219.19, 6½ per cent of the cost. Five per cent of the cost is paid for plans and specifications and 1½ per cent for supervision.

"And the county pays for the blueprinting and the printing of the specifications."

Anent the cancer discussion which in the last few weeks has been given so much publicity in the lay press, an Associated Press dispatch in the Los Angeles Times of March 21 states as follows:

"Plans for leading American cancer experts to investigate the new cancer extract at San Francisco were announced tonight to the Academy of Medicine of Northern New Jersey.

"To inform the public quickly is the purpose, Dr. Joseph Colt Bloodgood of Johns Hopkins University told the physicians. At the same time he appealed for 'some authoritative body of cancer students and scientists to deal with cancer cures announced by the daily press so frequently and in such an optimistic way that it reaches thousands of people dying of cancer and raises false hopes of a cure.'

Discoverers Invite

"The invitation to investigate, he said, came from Doctors Coffey and Humber, discoverers of the San Francisco serum.

"William W. Buffum, general manager of the Chemical Foundation, has already offered financial aid for such a commission,' Doctor Bloodgood said. It is hoped that other foundations interested in cancer and cancer research institutions will offer sufficient funds to allow representatives to go to California and make this investigation.

Publicity Deplored

"To one who has given education of the public continuous study for almost twenty years, this recent publicity of a cancer cure that is as yet not a cure, raises the hope that ultimately we may obtain the same results through the press with correct information, and that we may influence the readers who have not the disease but need the protection of correct information, just as profoundly as we can influence those dying of the disease.

"Publicity through the press and radio with correct information has as yet never been tested to the limit. That is the next thing to do in this country.' "

The following clipping reports the appointment of a committee of medical men by Doctor Bloodgood of Johns Hopkins University to investigate the Coffey-Humber suprarenal extract. The committee was appointed at the request of Doctors Coffey and Humber.

The clipping is an Associated Press dispatch taken from the Los Angeles Times of March 22, and is as follows:

"Several distinguished American medical men were named today on a commission to go quickly to San Francisco to investigate the Coffey-Humber cancer experiment.

"Included are: United States Surgeon-General Cummings, Dr. Charles Mayo, Dr. Morris Fishbein, editor of the Journal of the American Medical Association; Dr. Francis Carter Wood of Columbia University; Dr. Clarence Cook Little, Dr. James Ewing of Cornell, Dr. Gideon Wells of the University of Chicago, and Dr. Joseph Colt Bloodgood of Johns Hopkins. The commission has a number of leading cancer experts.

"The invitation was telegraphed from a train at Liberal, Kansas, by Doctors Coffey and Humber, who are returning to San Francisco after testifying before a Senate committee about their cancer treatment.

Expenses To Be Paid

"The urge for speed was issued by Doctor Bloodgood who said that yesterday alone he was personally asked by sixty cancer sufferers whether they should go to San Francisco and ask the westerners to experiment upon them. These requests came to Bloodgood from as far as Guatemala.

"The telegram named Doctor Bloodgood to select the members of the commission. It was addressed to General Manager William W. Buffum of the Chemical Foundation, to whom Doctor Bloodgood assigned charge of arrangements. The foundation has offered to pay expenses. Doctor Buffum said those invited will be consulted about setting the earliest possible date.

"In a statement Doctor Bloodgood said:

Bloodgood Statement

"An extract from the adrenal gland is being experimentally employed by Doctors Coffey and Humber in the treatment of hopeless cancer. The adrenal gland lies above the kidney and is one of the glands of internal secretion.

"The claim that it relieves pain is no evidence of the curative value, because many other sera, extracts and other forms of treatment have temporarily relieved pain but never accomplished a cure.

"The claim that this adrenal extract produces central necrosis (breaking down of cells) in the cancer is also not an evidence of its curative value; because this necrosis takes place spontaneously in all cancer and has been observed to take place after many forms of treatment.

"At the present time cancer students throughout the world agree that there are but two forms of treatment that have ever accomplished permanent cures; complete removal of the cancer tumor by operation, or irradiation by x-ray and radium, with or without operation. . . ."

The good and bad effects of alcohol were formerly subjects of intense discussion by members of the medical profession. The opposite sides in the arguments usually held to their same viewpoints at the end of their discussions. Now, in connection with the Eighteenth Amendment, we are getting an indirect lay opinion concerning alcohol through the straw votes of the Literary Digest. The Los Angeles Evening Herald of March 20, printed the following figures:

Votes for repeal of prohibition continue to lead in the Literary Digest's nation-wide poll. Figures for the second week of the straw vote are as follows:

State—	For Enforcement	For Modification	For Repeal	Total
California .....	16,709	19,377	20,847	56,933
Connecticut .....	1,196	2,495	4,507	8,198
District of Columbia .....	1,022	1,326	2,227	4,575
Georgia .....	2,529	2,054	2,024	6,607
Illinois .....	19,502	26,225	37,657	83,384
Indiana .....	12,355	8,842	8,271	29,468
Iowa .....	12,960	9,181	8,362	30,503
Kansas .....	11,968	4,721	3,343	20,032
Michigan .....	8,047	7,792	9,314	25,153
Minnesota .....	11,625	11,518	13,858	37,001
Missouri .....	13,101	11,648	18,211	42,960
Nebraska .....	5,051	3,291	2,633	11,025
New Jersey .....	6,745	12,968	19,543	39,256
New York .....	24,296	54,917	84,128	163,341
North Dakota .....	1,160	1,085	1,179	3,424
Ohio .....	22,387	23,424	23,231	69,042
Oregon .....	3,555	2,779	1,996	8,330
Pennsylvania .....	1,906	3,064	5,750	10,720
South Dakota .....	1,370	1,118	916	3,404
Washington .....	6,103	5,975	5,094	17,172
Wisconsin .....	8,322	10,341	14,744	33,407
	191,909	224,141	287,885	703,935



## TWENTY-FIVE YEARS AGO\*

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. III, No. 4, April 1905

*From some editorial notes:*

... *Thank God!*—With the deepest and most profound reverence, one may well say, Thank God! The legislature has adjourned *sine die*! Fortunately no harm has been done so far as the relations of the physician to the public are concerned, and the standards required for eligibility to practice medicine within the state remain unchanged. The more than dangerous antivaccination bill, which was passed by both houses, was vetoed by the Governor, of course. Assembly Bill No. 267, which amended the present medical law practically out of existence. . . .

... Assembly Bill No. 1164, which amended the same law in the section defining the practice of medicine in such a way as to permit any pharmacist to practice medicine or surgery, was, on the same day, refused passage by a vote of 13 to 34. The two bills representing the very acme of superlative legislative asininity, the bills creating a board of examiners of "naturopathy" (?), died on the file. . . .

... For all of these things let us be thankful, and for that we do not have to be watchful for another two years, let us unite in saying, Thank God! The legislature has adjourned! But what an ironical commentary on the venality of the men we elect to frame our laws!

... *The Panama Canal Commission.*—Dr. C. A. L. Reed of Cincinnati has recently returned from his trip of inspection to the "Canal Zone" and has submitted his report, which appears in full in *The Journal of the American Medical Association*, March 11, 1905. . . .

... It was not so much the Chagres River that defeated the French company in its efforts, as it was the little mosquito, carrying yellow fever and estivo-autumnal malaria from victim to victim. In Cuba, Colonel Gorgas has shown what he can do to put to rout these pests if he is given a free hand. To trammel and tie down such a man when the issue is one of thousands of lives and millions on millions of dollars—not to speak of the reputation of a country and its president. . . .

... By all means, Mr. Roosevelt, do away with your foolish "commission," and let the men who have the brains and the ability dig the ditch. . . .

... *Have We Won the Fight?*—The journal takes considerable pleasure in publishing, on page 103, the full statement of a newly organized "Council on Pharmacy and Chemistry" of the American Medical Association. . . .

... Of course the very idea that the criticisms published in your journal may have had anything to do with this latest action of the trustees of the American Medical Association is not to be found in the editorial; that would be a degree of broadmindedness hardly to be expected, under the circumstances; the child seldom kisses the hand that spans it. . . .

... In a letter from a friend in New York, very recently received, appeared the following sentences, which we beg permission to quote: "I do not know how far you are acquainted with what is going on below the surface in the American Medical Association. I am myself not in a position to get very much information, but I know enough to be able to tell you positively that you are not going to win in your fight for the purification of the advertising pages of *The Journal of the American Medical Association*—for the good and sufficient reason that you have won it already! . . .

\* This column aims to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

*From an article on "Report on an Epidemic of Diphtheria" by Ray Lyman Wilbur, M. D., Stanford University:*

It is my aim to present to you in this paper a brief report on forty-three cases of diphtheria that recently came under my observation, and also to outline the methods used to prevent the spread of the disease, particularly by the prophylactic injection of antitoxin.

*From an article on "Postoperative Ventral Hernia—Its Causes and Prevention" by C. George Bull, M.D., Alameda:*

That hernia of the abdominal wall may follow celiotomy is too well known to require more than a bare statement. Its frequency varying from one per cent in clean cases to between 20 and 25 per cent in septic cases is very suggestive. Let us first, however, examine into its more frequent causes and we shall then be in a better position to determine how to prevent it. . . .

*From medical society reports:*

*Alameda County.*—The program arranged for the evening consisted of a symposium on infant feeding, as follows: "Breast Feeding," Dr. Dudley Smith; "Home Modification of Cow's Milk," Dr. Charles A. Dukes; "Proprietary Foods," Dr. Hubert N. Rowell. . . .

*San Francisco County.*—The regular meeting for the month of March was held in the parlors of the Y. M. C. A. on the 14th, the meeting being called to order by the president, Dr. Emmet Rixford. Dr. Herbert C. Moffitt read a paper on "Clinical Observations in Nerve Syphilis," which was discussed by Doctors Montgomery, Power, and others. Dr. William Fitch Cheney read a paper on "Tubercular Meningitis with Report of Three Cases," which was generally discussed. . . .

*San Joaquin Valley Medical Society.*—... Dr. McClelland of Los Banos sent a splendid paper the subject of which was: "Old-Fashioned Remedies," in which he urged the profession to be better students of the materia medica, and to formulate their own prescriptions rather than to use so many ready-made and proprietary mixtures, said to contain this or that and to cure a number of different diseases. It was greatly enjoyed by all and freely discussed. . . .

*From an article on "Alcoholics" by Charles Anderson, M.D., Santa Barbara:*

The discussion of the use of alcohol in medicine is so complicated by the contention of the warring elements, vested interests on one side and the religio-politico-ethical opinions on the other, that it is almost a dangerous proceeding to attack the question; for one side or the other is almost sure to raise the cry of interest, or the charge that the party has been influenced by unworthy motives. Unfortunately the same state of affairs seems to have arisen within the medical profession as exists without, if the discussions in some of the journals are to be taken as an index. The organization of medical temperance societies shows that at least one side has taken a decided stand on a subject that, scientifically, is still *sub judice*.

What we want in the consideration of this subject are facts, scientifically determined facts, not arguments. The latter, most unfortunately, are what we have most of on both sides of the question. . . .

*From an article on "Uncinariasis, with Report of Seven Cases" by Herbert Gunn, M.D., San Francisco:*

Uncinariasis or ankylostomiasis, known as hookworm disease, Egyptian chlorosis, brickburners' anemia, miners' anemia, tunnel disease, etc., until recently believed to be endemic only in tropical countries, is now known to be widely distributed throughout Germany, France, northern Italy, southern United States, South America, etc. . . .



DEPARTMENT OF PUBLIC  
HEALTH

By W. M. DICKIE, *Director*

**Rabies Becomes More Extensive.**—The control of rabies in California becomes an increasingly greater problem each year. Totals of nearly 800 cases in animals have occurred in each of the past two years, and up to February 8 of the present year a total of ninety-four cases of rabies in animals has been reported within the state. The numbers of cases of this disease reported in California by years, since 1920 are as follows:

1920.....	176
1921.....	124
1922.....	559
1923.....	1092
1924.....	502
1925.....	353
1926.....	375
1927.....	376
1928.....	791
1929.....	786
1930 to February 8.....	94

This makes a total of 5228 cases reported in California during the past ten years. More than 75 per cent of these cases have been reported in the southern part of the state, but during the past few years the disease has been increasingly prevalent in northern counties. So far this year, cases have been reported in Fresno, Kern, Kings, Los Angeles, Napa, Riverside, Sacramento, San Diego, San Joaquin, Stanislaus, Tulare and Yuba counties. In some counties, where a few years ago intensive action was taken in the control of stray dogs, rabies had been almost eliminated.

The numbers of human deaths from rabies occurring in California since 1920 are as follows:

1920.....	4
1921.....	5
1922.....	4
1923.....	11
1924.....	5
1925.....	1
1926.....	5
1927.....	1
1928.....	3
1929.....	2

It is unfortunate that these human deaths have occurred, for they might, all of them, have been prevented if the disease in animals had been placed under control. The remedy lies in the control of the dog population, chiefly in the control of stray dogs. Rabies seldom occurs in dogs that are properly housed and cared for, unless they come in contact with stray animals which are infected with the disease.

While nearly all cases of rabies occur in dogs, cases have been found in California during the past ten years in cats, cows, horses, coyotes, goats, hogs, sheep, skunks, mules and foxes.

Persons who have been bitten by rabid animals are in great danger of contracting the disease. Bites upon the face near the large nerve centers are particularly dangerous. Wounds from dog bites should be cauterized, only, with concentrated (fuming) nitric acid. No other known agent is of any value whatsoever in cauterizing such wounds. The Pasteur treatment is preventive only, and in order to be effective its administration must be started early. Human beings who develop any symptoms of rabies do not recover. There is no record of anyone who ever contracted the disease having escaped with his life.

The first symptom of rabies in dogs is a change in disposition. Dogs which are normally good-natured become savage, and dogs which are normally savage generally become strangely docile. There is a change in the tone of the animal's voice. There follows a paralysis of the muscles of the throat which causes the animal to attempt to use the paralyzed muscles. This produces the tendency to bite, and it is during this stage that the disease is most readily transmitted. In the final stage of rabies, there is a complete paraly-

sis of the hind legs, the animal being unable to run without falling.

It is not always necessary that an individual must be bitten by a rabid dog in order to contract rabies. Many individuals have contracted the disease through handling sick animals, the infective agent gaining entrance through cuts or wounds in the skin. Because rabies is 100 per cent fatal in human beings, and because it produces one of the most agonizing diseases that is known, its control is of the utmost importance. As an economic measure in the prevention of losses to stock growers its control is also highly important.

**Investigations of Public Health Problems.**—While the disease known as Rocky Mountain spotted fever is no longer the deadly menace that it used to be, thanks to the protective vaccine devised by workers of the Public Health Service, there is evidence that the area of its distribution is considerably wider than was formerly supposed. The opening up of the country may also be expected to increase, at least temporarily, the exposure of persons to this disease. By analogy with other diseases, however, the ultimate reduction and virtual disappearance of this condition may be expected as a result of the intensive occupation of the land by an increased population. In the meantime, there is abundant opportunity for continued study in this field, since no means have as yet been discovered for eradicating the disease among the small animals which constitute the natural reservoirs of the infection, and since laboratory studies of the reputed cause of the disease have thus far failed to show conclusive results. The manufacture and distribution of the preventive vaccine developed by the Public Health Service have been continued and increased. Vaccine sufficient to vaccinate 5000 persons has been dispensed, but the results following its use, while excellent, have not been completely assembled.

For the first time in a number of years a definite increase of malaria has been observed in certain areas. This phenomenon has increased interest in the malaria problem, and studies are under way to determine its cause and to devise means for combating it. The use of Paris green for the control of malaria-carrying mosquitoes has been shown to have much wider application than was formerly supposed. Much work has been done on the application of this substance to breeding areas by means of inexpensive power handblowers to be used either from boats or from the shore in connection with portable equipment which would come within the means of almost any community. Gratifying progress has been made in the study of larvicides and new remedies for malaria. A trial of these various methods of malaria control will be made during the year on a county-wide scale in two widely separated counties.

The studies of the salt marsh mosquito problem have been completed. The report under preparation will be comprehensive and will include descriptions of the various kinds of breeding places of these mosquitoes; an enumeration of their species, habits and distribution; an estimate of the extent of the problem and various means of control which have been found effective in various places and under different circumstances.

There occurred during the past year a number of serious epidemics of meningococcus meningitis (cerebrospinal meningitis). Observations of the specific serum used in the treatment of this disease showed that the results were unequal or irregular, and a vigorous attempt is being made to improve the therapeutic efficiency of this serum. This is an extensive undertaking since strains of meningococci must be selected from various epidemics and studied as to their pathogenic and immunizing properties.

CALIFORNIA BOARD OF  
MEDICAL EXAMINERS

By C. B. PINKHAM, M. D.  
*Secretary of the Board*

In this issue in this column are given some excerpts from the 1929 annual report of the state medical examining board.\*

WRITTEN EXAMINATIONS

The high percentage of examinees that passed during the year 1929 is a practical demonstration of the high standard of present-day medical education. The percentage of failures among graduates of extra state schools was not so high as the prior year. Again our three active California medical schools have made a perfect score in the written examinations. A 1918 graduate of the College of Physicians and Surgeons of San Francisco, which closed the same year, failed.

RECAPITULATION, 1929, EXAMINATION RESULTS

Physicians and Surgeons

	Passed	Failed	Total	Per cent passed	Per cent failed
College of Medical Evangelists .....	53	0	53	100	0
Stanford University .....	45	0	45	100	0
University of California.....	40	0	40	100	0
College of Physicians and Surgeons, San Francisco.....	0	1	1	0	100
Extra state .....	†159	17	176	90+	9—
Totals .....	297	18	315	94+	5—

† Grades of three applicants raised by Review Committee.

\* \* \*

MEDICAL COLLEGES REPRESENTED

The following table lists the medical colleges that sent written examinees before the board, the year each applicant graduated from said medical college, and whether passed or failed:

School	Year of graduation	Passed	Failed	Total
Boston University .....	1928	1	0	1
College of Medical Evangelists.....	1927	1	0	1
	1928	3	0	3
	1929	49	0	49
College of Physicians and Surgeons, Boston .....	1916	0	1	1
College of Physicians and Surgeons, San Francisco .....	1918	0	1	1
Columbia University College of Physicians and Surgeons.....	1928	1	0	1
Creighton University School of Medicine .....	1928	3	0	3
	1929	6	3	9
Dalhousie University Faculty of Medicine .....	1927	1	0	1
George Washington University Medical School .....	1929	1	0	1
Harvard University Medical School.....	1924	1	0	1
	1925	1	0	1
	1926	1	0	1
	1927	1	0	1
	1928	2	0	2
	1929	1	0	1
Howard University School of Medicine .....	1921	0	1	1
Indiana University School of Medicine .....	1924	0	1	1
Indiana University School of Medicine .....	1924	1	0	1
Jefferson Medical College.....	1928	1	0	1
	1929	1	0	1
Johns Hopkins University School of Medicine .....	1923	1	0	1
	1928	2	0	2
Laval University Faculty of Medicine .....	1912	0	1	1
Loyola University School of Medicine .....	1928	1	0	1
	1929	2	0	2
Marquette University School of Medicine .....	1929	1	0	1
McGill University Faculty of Medicine .....	1920	1	0	1
	1926	1	0	1
	1928	1	0	1
	1929	1	0	1
National University of Athens, Greece .....	1923	1	0	1
National University of Mexico, Faculty of Medicine.....	1914	1	0	1
	1918	1	0	1
	1924	0	1	1

\* See also editorial in this issue concerning annual report of the state medical examining board.

School	Year of graduation	Passed	Failed	Total
Northwestern University Medical School .....	1921	1	0	1
	1927	2	0	2
	1929	10	0	10
Ohio State University College of Medicine .....	1926	1	0	1
Queen's University Faculty of Medicine .....	1915	0	1	1
Royal University of Siena.....	1928	1	0	1
Rush Medical College.....	1903	1	0	1
	1920	1	0	1
	1925	1	0	1
	1927	1	0	1
	1928	3	0	3
	1929	13	0	13
St. Louis College of Physicians and Surgeons .....	1923	1	0	1
St. Louis University School of Medicine .....	1928	2	0	2
	1929	5	0	5
Stanford University School of Medicine .....	1928	3	0	3
	1929	42	0	42
Trinity Medical College (Toronto)....	1904	1	0	1
Tufts College Medical School.....	1927	1	0	1
Tulane University of Louisiana School of Medicine.....	1925	1	0	1
	1929	4	0	4
	1927	1	0	1
University of Arkansas.....	1927	1	0	1
University of Bonn Faculty of Medicine .....	1923	1	0	1
University of Buffalo.....	1928	1	0	1
University of California Medical School .....	1928	2	0	2
	1929	38	0	38
University of Carrollna, Prague, Czech .....	1921	0	1	1
University of Cincinnati College of Medicine .....	1929	2	0	2
University of Colorado School of Medicine .....	1928	4	0	4
	1929	1	0	1
University of Glasgow Faculty of Medicine .....	1890	0	1	1
University of Göttingen, Germany....	1922	1	0	1
University of Guadalajara, Mexico....	1918	1	0	1
	1922	0	1	1
	1928	0	1	1
University of Illinois College of Medicine .....	1922	1	0	1
	1924	1	0	1
	1927	1	0	1
	1928	4	0	4
	1929	6	0	6
	1928	3	2	5
University of Iowa.....	1928	3	2	5
University of Louisville School of Medicine .....	1927	1	0	1
	1928	2	0	2
University of Manitoba Faculty of Medicine .....	1916	1	0	1
University of Maryland School of Medicine .....	1928	1	0	1
University of Michigan Medical School .....	1927	1	0	1
	1928	2	0	2
University of Minnesota Medical School .....	1928	1	0	1
	1929	1	0	1
University of Nebraska College of Medicine .....	1928	1	0	1
	1929	4	0	4
University of Oklahoma School of Medicine .....	1928	3	0	3
University of Oregon Medical School .....	1927	1	0	1
	1928	3	0	3
	1929	4	0	4
	1929	1	0	1
University of Pennsylvania.....	1929	1	0	1
University of Pittsburgh School of Medicine .....	1927	1	0	1
	1928	1	0	1
University of Tennessee College of Medicine .....	1929	1	0	1
University of Tomsk, Siberia.....	1911	1	0	1
University of Toronto Faculty of Medicine .....	1928	1	0	1
	1929	1	0	1
University of Vermont College of Medicine .....	1928	1	0	1
University of Vienna Faculty of Medicine .....	1923	0	1	1
University of Wisconsin Medical School .....	1928	2	0	2
	1929	1	0	1
Vanderbilt University School of Medicine .....	1928	1	0	1
Washington University School of Medicine .....	1928	2	0	2
	1929	2	0	2
Western Reserve University School of Medicine .....	1928	1	0	1
Woman's Medical College.....	1927	1	0	1
Yale University School of Medicine .....	1926	1	0	1
Totals .....		298	16	314



SOURCE OF RECIPROCITY LICENTIATE

The greater number of reciprocity certificates in 1929 were issued to applicants from Illinois, and Ohio shared second place with Missouri, while New York, which headed the list in 1928, ranked fourth, sharing honors with Iowa and Minnesota.

Tabulation by States

State	1928	1929	State	1928	1929
Alabama	0	10	Nebraska	16	9
Alaska	0	0	Nevada	0	2
Arizona	0	4	New Hampshire	0	0
Arkansas	0	0	New Jersey	0	1
Colorado	8	11	New Mexico	0	1
Connecticut	0	1	New York	27	13
Delaware	1	0	North Carolina	1	2
District of Columbia	1	1	North Dakota	3	4
Florida	1	3	Ohio	9	16
Georgia	3	2	Oklahoma	4	2
Hawaii	2	0	Oregon	6	11
Idaho	8	2	Pennsylvania	9	6
Illinois	19	26	Philippine Islands	0	0
Indiana	8	5	Rhode Island	1	0
Iowa	6	13	South Carolina	0	0
Kansas	4	6	South Dakota	2	4
Kentucky	2	1	Tennessee	1	6
Louisiana	2	3	Texas	6	4
Maine	1	0	Utah	8	6
Maryland	6	11	Vermont	0	1
Massachusetts	2	3	Virginia	1	1
Michigan	10	14	Washington	5	7
Minnesota	15	13	West Virginia	0	0
Mississippi	0	0	Wisconsin	4	6
Missouri	13	16	Wyoming	1	1
Montana	3	3	Totals	221	241

\* \* \*

HEARINGS

Charges of unprofessional conduct under the provisions of Section 14 of the Medical Practice Act have been filed against thirty licentiates during the year just closed, a decrease of six from the number of hearings held during the prior year.

It is indeed disheartening when after weeks of earnest endeavor in securing evidence, after hours of patient listening to the testimony submitted and thereafter determining the respondent guilty of having obtained a California license by fraud, to have some court set aside the finding of the board, not because of the evidence, but because of some technicality wherein a complaint was faulty, losing sight of the important issue, namely, fraud in obtaining a California license. Two such cases, one for seven years, another for five, have blocked the California board in revoking licenses convincingly shown to have been obtained by fraud. Injunction, pending in one case for practically two years, stops the board from openly acting on the sworn testimony of two confessed dealers in fraudulent credentials, both of whom testified—one that as an official examiner of the State of Missouri he had made out a false certificate of alleged examination which mentioned that the individual named therein had been examined for three days, whereas said examiner testified under oath to the California board he had not seen the examinee. He further stated he had sold this educational certificate with other fraudulent credentials to our other witness. Our second witness testified he had procured said certificate from the witness first mentioned and in turn had sold it to the individual who used it as an important part of his credentials to obtain a California license. 'Tis a sad commentary on modern justice that, with such evidence of fraud, the courts so tie the hands of the Board of Medical Examiners that a license obtained by fraud cannot be revoked. Here again the Diploma Mill Bill offers a ray of hope, and we trust that, though our efforts to revoke a license obtained by fraud are in vain, we have a trump card through prosecution on a felony complaint.

As noted in prior reports, narcotic violators comprise the largest group of those charged with unprofessional conduct, although *less* in number than the year 1928:

(a) Narcotic	10
(b) Illegal operation (alleged)	9
(c) Habitual Intemperance	3
(d) Miscellaneous	8
Total	30

The judgments rendered by the board during the year just closed are classified as follows:

Guilty—Revoked	8
Guilty—Probation	7
Guilty—Penalty suspended	2
Dismissed	4
Deferred to February, 1930	9
Total	30

Department of Professional and Vocational Standards, Board of Medical Examiners.—Results of the written examination for physician and surgeon certificate held in Los Angeles February 4 to 6, inclusive, 1930:

School	PASSED	Year of Graduation	Per Cent
College of Medical Evangelists	(1929)		86
Creighton University School of Medicine	(1929)		81 1/9
Harvard University Medical School	(1928)		85
Long Island College Hospital	(1929)		90 2/9
Northwestern University Medical School	(1927)		87 4/9
Northwestern University Medical School	(1929)		83 7/9
Northwestern University Medical School	(1929)		82 3/9
Rush Medical College	(1921)		81 4/9
Rush Medical College	(1923)		87 2/9
Rush Medical College	(1929)		75 7/9
Rush Medical College	(1929)		82
Rush Medical College	(1929)		81 6/9
St. Louis University School of Medicine	(1929)		80 8/9
St. Louis University School of Medicine	(1929)		82 5/9
St. Louis University School of Medicine	(1929)		79
St. Louis University School of Medicine	(1929)		82 5/9
Tulane University School of Medicine	(1928)		83 7/9
Tulane University School of Medicine	(1929)		86 2/9
Tufts College Medical School	(1929)		80 8/9
University and Bellevue Hospital Medical College	(1927)		82 6/9
University of Colorado School of Medicine	(1924)		77 5/9
University of Colorado School of Medicine	(1929)		92 2/9
University of Colorado School of Medicine	(1929)		83
University of Colorado School of Medicine	(1929)		90 1/9
University of Colorado School of Medicine	(1929)		89 1/9
University of Colorado School of Medicine	(1929)		81 8/9
University of Illinois College of Medicine	(1929)		83 8/9
University of Illinois College of Medicine	(1929)		85 1/9
University of Iowa Medical Department	(1928)		79 1/9
University of Kansas School of Medicine	(1929)		84.5
University of London	(1926)		85
University of Louisville School of Medicine	(1929)		83 5/9
University of Minnesota Medical School	(1927)		86.3
University of Nebraska College of Medicine	(1928)		81 1/9
University of Oklahoma School of Medicine	(1929)		82 4/9
University of Oklahoma School of Medicine	(1929)		83 6/9
University of Oregon Medical School	(1929)		88 1/9
University of Rochester School of Medicine	(1929)		91 1/9
Stanford University Medical School	(1929)		80 1/9
Washington University Medical School (St. Louis)	(1929)		85 3/9
Washington University Medical School (St. Louis)	(1929)		82 8/9
Western Reserve University School of Medicine	(1929)		81
Woman's Medical College of Pennsylvania	(1929)		89 8/9

FAILED

Charles University of Prague	(1921)	72 4/9
College of Physicians and Surgeons, Boston	(1916)	65 8/9
Creighton University School of Medicine	(1929)	73 3/9
University of Guadalajara (Mexico)	(1921)	64 6/9
University of Guadalajara (Mexico)	(1923)	69
University of Illinois College of Medicine	(1924)	74 4/9

News Items, April, 1930

Recent reports relate that a narcotic prescription made out for Ralph Conley and signed P. H. Sweet, M. D., was recently presented at the Roscoe Drug Store, Roscoe, and paid for with a \$10 check by a party posing as Ralph Conley, who received \$8.25 in change, the check later being returned by the West Los Angeles branch of the Bank of Italy, on which it was drawn, marked "No account at this branch."

Giuseppe Accardo, announcing himself as a specialist for sprains, dislocation and rheumatism of the



spine, on February 24 pleaded guilty in the city of Los Angeles to a charge of violation of the Medical Practice Act and was given a suspended sentence of a \$200 fine or twenty days in the city jail.

According to reports, L. Allison, practicing what he calls "Weltmer-Craig System of Magnetic Healing" at 120 North Orange Street, Glendale, on March 1 pleaded guilty to a charge of violation of the Medical Practice Act and paid a fine of \$100, sentence being suspended for two years on condition of no further violation of the Medical Practice Act.

Heated words flew at the concluding session of the State Board of Medical Examiners' three-day meeting at Foresters Hall, 1329 South Hope Street, yesterday as a result of a legal fight over the case of Dr. Francis J. Bold, Whittier, charged with having performed an illegal operation. Attorney William T. Kendrick, Sr., appearing for his son, who had obtained a writ of prohibition halting the board's hearing of charges, set off the verbal fireworks when he attempted to explain the defense procedure. The board members contended that it had been stipulated they were to be notified when the petition for the writ was presented in court, but they asserted they had not been so notified. Prosecutor Richard Lyman scored the defense for what he described as a "flagrant breach of faith." Attorney Kendrick originally obtained a writ of prohibition in Superior Judge Wilson's court. The judge dissolved the writ at a hearing yesterday, to which all the members of the board had been subpoenaed, but gave the defense leave to amend. Another writ was obtained in the court of Superior Judge Wood, returnable next Tuesday before Superior Judge Gates . . . (Los Angeles *Times*, February 7, 1930).

According to reports, A. S. Clayton, advertising as an "electric needle specialist, removing superfluous hairs, warts, moles permanently removed . . ." recently pleaded guilty in Ventura on a charge of violation of the Medical Practice Act and was sentenced to pay a fine of \$100, sentence being suspended.

According to reports, Lucy V. Craig of Montrose on March 1 pleaded guilty to a charge of violation of the Medical Practice Act and was sentenced to pay a fine of \$100, suspended for two years on condition of no further violation, it being stated that she was engaged in practicing the Weltmer-Craig system of magnetic suggestive therapeutics and held a diploma "evidently issued by her and her husband to herself, the same being signed A. L. Craig, president, and L. V. Craig, secretary. That it was her intention to issue these diplomas in Glendale is indicated by the fact that she had in her place of business diplomas in blank, already signed by her husband and sealed, ready to fill out for anyone who wanted one. . . ."

Answering a recent attack on the policy of the state in regulating professions and vocations and permitting members to remove from practice those under their jurisdiction, which appeared in a newspaper published in Chico by one of our legislators, the San Francisco *Recorder* of Monday, February 10, 1930, takes up the cudgels for the licensing boards, relating that in the original article the author "fails to state that in every instance persons disciplined or denied the right to continue in practice, have the right to appeal to the courts for a review of the action of the disciplining body; nor does he point out that no civil remedy in the form of an action for damages for malpractice has been taken away from the people by these regulatory statutes. As a matter of fact, the public is far better protected today than it has ever been against crooks, charlatans, and incompetents, for now such persons in regulated professions and vocations may be removed from their opportunity to do further damage to those who entrust themselves or their affairs to their hands."

Police reports that Maurice E. Eisenbach has been arrested in Jacksonville, Florida, with stolen medical credentials of Dr. Joseph H. Marks of Los Angeles in his possession, were announced today by Dr. Charles B. Pinkham, secretary of the Board of Medical Examiners. Doctor Marks, seeking a California state license, informed state board officials last week that his medical diploma and credentials, as well as his United States Army Medical Corps commission were stolen in January while he was serving as an intern in a St. Louis hospital. He said he suspected Eisenbach, a fellow intern (San Francisco *Examiner*, March 13, 1930). The documents reported by Doctor Marks as having been taken from him were a 1928 medical diploma from the St. Louis University Medical School, a 1928 Missouri state license (No. 20158), a 1928 United States Army Medical Corps commission, a certification of internship at the Jewish Hospital, a Carthage (Missouri) High School diploma, a Zeta Beta Tau fraternity certificate, and a 1928 St. Louis University class picture.

According to reports, P. S. George was on February 7, in the city of Los Angeles, adjudged guilty of violation of the Medical Practice Act and sentenced to pay a fine of \$100, sentence suspended on condition of no further violation.

The name of Robert Griffin, "physiotherapist and x-ray specialist," was listed at police headquarters today. He was arrested in his downtown office, 747 South Hill Street, accused of violating the State Poison Act, by possession of two complete narcotic hypodermic outfits. The arrested man was listed as general manager and director of Health Studios, Ltd. (Los Angeles *Record*, February 18, 1930.)

Petition for writ of review by Dr. Fred B. Tapley to compel the State Board of Medical Examiners to restore his license, was taken under submission yesterday by Superior Judge Walter Perry Johnson. The license of Doctor Tapley, Marysville, was revoked last July when Doctor Tapley was accused of performing two illegal operations (San Francisco *Examiner*, January 16, 1930).

A ninety day jail term was hung over the head of Dr. J. M. Threadgill, Westwood physician, yesterday, by Municipal Judge Wilbur C. Curtis, to remind him to report treatment of gunshot wounds hereafter to police. The doctor pleaded guilty yesterday, saying he innocently had violated the law when he secretly treated a bullet wound in the head of Theodore Jerke, asserted bandit (Los Angeles *Illustrated News*, December 27, 1929).

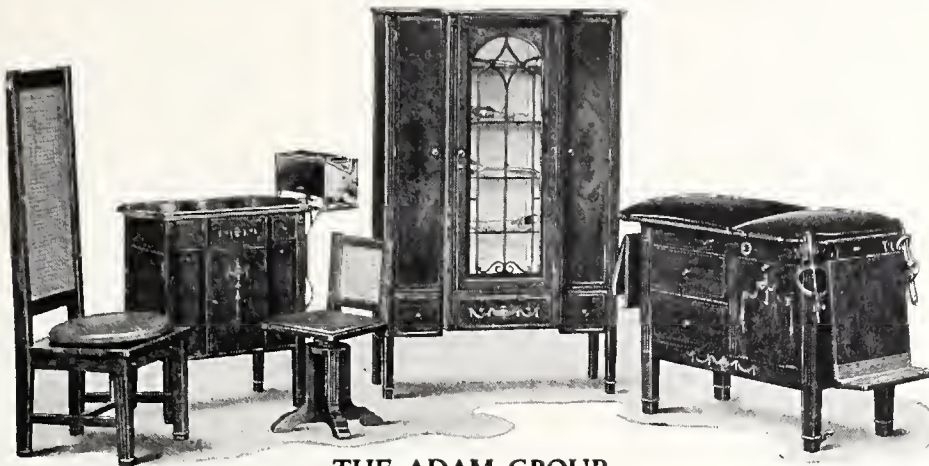
Dr. H. G. Throop, drugless physician with offices at 109 North Bright Avenue, was found not guilty of practicing as a chiropractor. . . . On another charge, one of advertising as a chiropractor, he was found guilty and sentenced to pay a fine of \$50, which he paid (Whittier *News*, December 3, 1929).

The County Grand Jury last night began investigation into charges against several hospital and health associations. Eight complaints are on file. The complaints allege the associations sold hospital or medical service to members, but when ailing members sought treatment it was either postponed or refused outright (San Francisco press dispatch, printed in the Sacramento *Bee*, January 22, 1930).

T. Wah Hing, well-known Sacramento . . . Chinese herb specialist, yesterday was charged with practicing without a license in a complaint issued by the district attorney's office and filed with Justice of the Peace Silas Orr of North Sacramento. The complaint was issued following an objection filed by members of the State Board of Medical Examiners . . . (Sacramento *Union*, January 28, 1930). (Previous entries, December 1925, January 1926, and January 1927.)



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## TRUTH ABOUT MEDICINES

(Continued from Page 31)

and Humber have, like those of most investigations, been exaggerated in current reports.—*Jour. A. M. A.*, February 1, 1930, p. 343.

**More Misbranded Nostrums.**—The following products have been the subject of prosecution by the Food, Drug, and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act: Lunge Heala (Norwich Pharmacal Company) consisting essentially of compounds of ammonium, calcium, sodium, potassium and phosphorus, with chlorids, tar, traces of menthol and chloroform and extracts of plant drugs, including wild cherry, together with alcohol, sugar and aromatic substances. Arnistead's Ague Tonic (W. M. Akin Medicine Company), consisting essentially of quinin sulphate, extract of plant drugs, sugar, alcohol and water, flavored with cinnamon. Merle's Cod-liver Oil Tablets (Devore Manufacturing Company), containing metallic iron, zinc compounds, phosphids, berberin, strychnin, and a small amount of fish oil. Laxative Anti-Gripine (Anti-Gripine Company), consisting essentially of acetanilid (215.8 grains per ounce), sodium salts, carbonates, red pepper, podophyllin, aconite alkaloids and extracts of plant drugs, including a laxative. Arkadin, consisting essentially of creosote, menthol, benzoate of soda, quaiacol, phenol, mydriatic alkaloids, sugar, alcohol, and water. Cod-Liver Oil Compound Tablets (Morgenstern Company) containing iron and zinc compounds, strychnin, extracts of plant drugs including ginger, and a laxative drug with a trace of fish oil. Broncil (Modern Products Company), consisting essentially of ammonium chlorid, menthol, tolu balsam, oil of eucalyptus, extracts of plant drugs, including wild cherry, tartar emetic, sugar, and alcohol.

(Continued on Next Page)

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## TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

Jarabe Compuesto Cocillana Tropical (American Tropical Remedy Company), consisting essentially of an extract of a plant drug, menthol, alcohol, sugar, and water. McK & R Cold and Grippe Tablets (McKesson and Robbins, Inc.), containing acetanilid, cinchonidin, hydrobromid, camphor, aloin, and a laxative plant drug extractive. Amber-O-Latum (Amber-O-Latum Company), consisting essentially of an ointment with a lanolin and petrolatum base, containing oil of wintergreen, oil of mustard, camphor, and eucalyptus. Griperol (Gabriel J. Fajardo), consisting essentially of ammonium, hypophosphites, chlorids, cod-liver oil extract, menthol, tar, and other pine products, alcohol, sugar, and water. Mack's Cold Capsules (S. Pfeiffer Manufacturing Company), containing acetanilid, quinin, sodium and potassium compounds, bromids, methyl salicylate, and aloin. La Flugo Cold Tablets (Lincoln Pharmacal Company), containing calcium and sodium salts, sulphates, camphor, oleoresin of capsicum, traces of the alkaloids of ipecac and aconite, and extracts of plant drugs. B. B. Headache Powders (Bostwich Bros.), containing 3.3 grains of acetanilid, each, with aspirin, potassium bromid and caffenin. Mintol Vapocream, an ointment with a petrolatum base, containing carbolic acid, formaldehyd, peppermint and eucalyptus oil, camphor and menthol. Ru-Bon No. 1 (Ru-Bon Chemical Company) consisting essentially of chrysarobin, ether, alcohol, and water. Ru-Bon No. 2 (Ru-Bon Chemical Company), consisting essentially of chrysarobin, salicylic acid, resorcin, glycerin, volatile oils, alcohol, and water. Ru-Bon No. 3 (Ru-Bon Chemical Company), containing resorcin, salicylic acid, chrysarobin, volatile oils, glycerin, alcohol, and water.—*Jour. A. M. A.*, February 1, 1930, p. 357.

(Continued on Page 38)

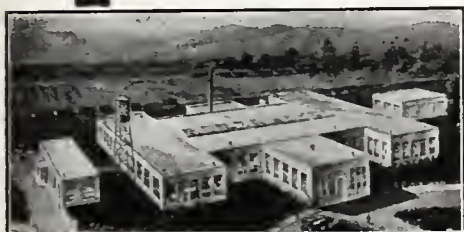


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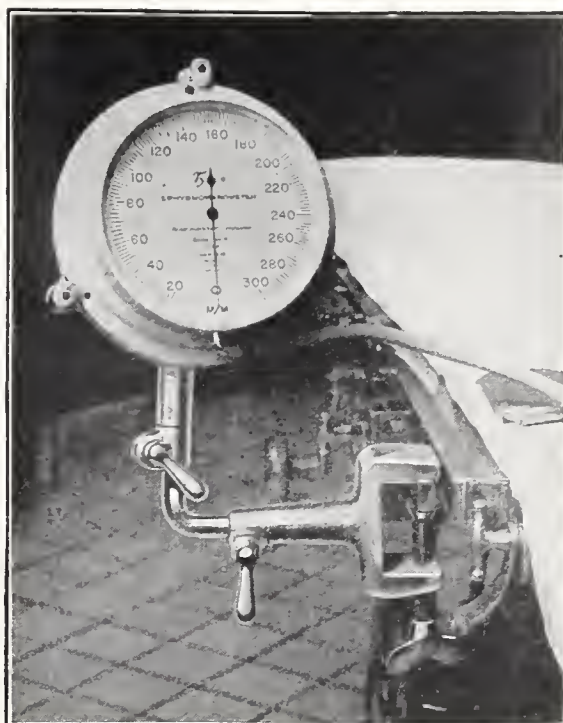
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**The Larkin House.**—In 1832 Thomas O. Larkin came to Monterey. He opened a wholesale and retail store, and became the first and only United States Consul to California. Larkin performed stellar service toward bringing California under the American flag. The large adobe home he built almost a hundred years ago is a point of great interest to visitors, and is still occupied by a descendant of the builder.

**Sherman's Headquarters.**—Next to the Larkin house is another adobe built by Larkin in 1834. Here was headquartered William Tecumseh Sherman when he was stationed at Monterey. At that time the man—who was later to be a famous Civil War general—was a lieutenant. General Halleck was headquartered at the same place. Sherman, as a youth in Monterey, figured in one of Monterey's wistful legends.

Young Sherman was enamored of "the most beautiful señorita of the town." When he was ordered East he called to take his farewell. He was wearing a "cloth of gold" rose which the two of them reverently planted. Sherman declared that when the rose bloomed he would return for the señorita. Years rolled by. The rose grew and enveloped the señorita's doorway and wall with blossoming branches. Into old age waited the faithful señorita, but Sherman never returned. Recently Sherman Rose House was removed to make way for a modern bank building. It is being restored in another part of the city.

**House of the Four Winds, Monterey.**—This rambling old structure was the first in this community to boast a weather vane. Thus it received its name. Also built by Larkin, the House of the Four Winds was the first Hall of Records of the state. It is now used as a club building by the Monterey Woman's Civic Club.



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**For Blood Pressure Determina-  
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For the convenience of anaesthetists and surgeons, who are finding that accurate blood pressure readings are invaluable during anaesthesia and surgery, we have designed this *Tycos Surgical Unit*.

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**TRUTH ABOUT MEDICINES**

(Continued from Page 36)

**Ceanothyn Not Acceptable for New and Nonofficial Remedies.**—In 1926 the Council on Pharmacy and Chemistry found Ceanothyn (Flint, Eaton & Co.) unacceptable for New and Nonofficial Remedies because its composition was uncertain, because no tests were furnished to control its uniformity and identity, and because no satisfactory evidence for its therapeutic value had been submitted. Later the firm requested reconsideration of the product, submitting as evidence reports of experimental and clinical studies carried out with Ceanothyn. The firm also submitted new advertising in which it is stated that each lot is physiologically tested and that this insures a uniform product; but no acceptable evidence to support this claim was furnished. A "blind test" made for the Council gave no satisfactory evidence that Ceanothyn changes the clotting time of the blood. In consideration of the unestablished and therefore unwarranted therapeutic claims for Ceanothyn, and in further consideration of the inconclusive character of the available evidence for the drug's value as a coagulant, the Council confirmed its decision holding the product unacceptable for New and Nonofficial Remedies.—*Jour. A. M. A.*, February 8, 1930, p. 410.

**Vigantol Not Acceptable for New and Nonofficial Remedies.**—When reports of experimental clinical studies made it apparent that irradiated ergosterol preparations would be offered for therapeutic use, the Council on Pharmacy and Chemistry undertook to select a name for this vitamin D bearing product. The Council did this so that products of this kind might be marketed under a single name and thus the confusion avoided which inevitably results when the same product is marketed under a multiplicity of names. The Council adopted "Viosterol" as the New

(Continued on Page 41)



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**Missions at Monterey and Carmel**—On June 3, 1770, Father Serra founded the San Carlos Mission of Monterey. But little later it was removed to the Carmel Valley, about six miles distant. Now it is called Carmel Mission. Father Serra and fifteen governors of the early territory are buried in this consecrated church. It is the most famous of all Franciscan Missions, and is visited by thousands of tourists annually. Here was completed, in 1924, the monumental sarcophagus to Father Junipero Serra, one of the masterpieces of western sculpture, the creation of Jo J Mora of Pebble Beach.

The Church of San Carlos de Monterey was erected in 1794, and was known as the Royal Chapel. Here worshiped the representatives of the King of Spain. It is an interesting old structure. The transept and present main altar were erected in 1858.

**Sloat Monument.**—There is one monument outside of Washington, D. C., partially financed by Congress, in commemoration of an officer's deeds. That single monument stands on the Monterey Peninsula. Congress appropriated \$10,000 toward this memorial, which honors the man who took possession of California for the United States in 1846. On a hill in the Federal reservation it rests, with a granite base built of contributed blocks from thirty-five California counties, cities, and interested organizations.

**Old Pacific Building.**—This old adobe, Scott and Main streets, Monterey, was built in 1847 by Thomas O. Larkin. The upper story was used as a boarding house for sailors. The first floor served as court-house, jail, and storehouse. All windows, above and below, were iron-barred to protect the inmates against Indians and marauders. In the old Mexican days the back yard, surrounded by a high adobe wall, was used for bear and bull fights. In 1866 the property came into the possession of the Jacks family.

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### TRUTH ABOUT MEDICINES

(Continued from Page 38)

and Nonofficial Remedies name for irradiated ergosterol and the name "Viosterol in oil 100 D" to designate a preparation containing the substance dissolved in oil and having one hundred times the vitamin D potency of a standard cod-liver oil. Four firms have made their products acceptable under the Council name for inclusion in New and Nonofficial Remedies. The Winthrop Chemical Company is offering to physicians of the United States a brand of viosterol in oil 100 D under the proprietary name "Vigantol." The Council declared "Vigantol" unacceptable for New and Nonofficial Remedies because the application of a proprietary name to a preparation of irradiated ergosterol is contrary to the best interest of the medical profession and of the public.—*Jour. A. M. A.*, February 8, 1930, p. 410.

The Twenty-Fifth Anniversary of the Council on Pharmacy and Chemistry.—At a meeting held February 3, 1905, the board of trustees of the American Medical Association created an advisory board to be known as the Council on Pharmacy and Chemistry. The organization of this Council was perfected on February 11, 1905. Thus the Council on Pharmacy and Chemistry passes the twenty-fifth year of its organization and continues, in a second quarter century, one of the most notable works for scientific medicine ever accomplished by any organized group. It is significant that several of the original members of the body have maintained their connection since its inception and that the secretary, W. A. Puckner, has rendered continuous service as a full-time officer for the body from the first. The Council could not have achieved what it has, without the support of the medical profession of our country. Thus, with the establishment of the Council, the advertising of me-

(Continued on Page 43)

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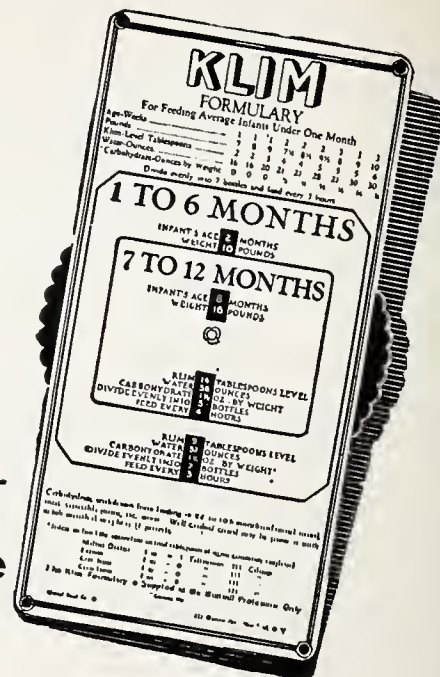
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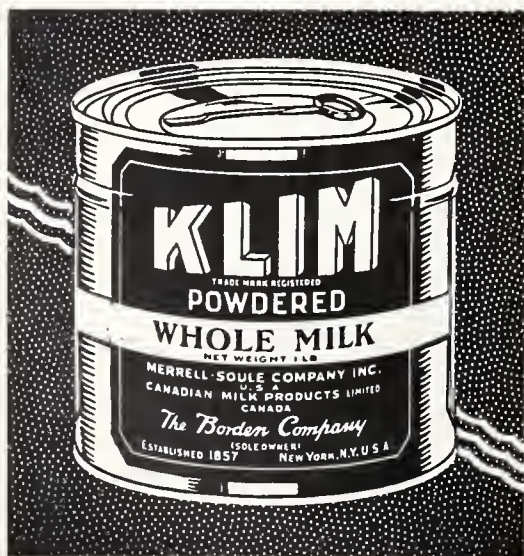
**A**s a result of extensive tests in feeding large numbers of cases, the Klim Formulary pictured herewith has been arranged.

This infant-feeding calculator is designed to make the computation of Klim formulae in average cases as simple and accurate as possible. At a glance it makes available the most approved combinations of Klim, water and carbohydrate together with frequency of feedings.

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137 North Myrtle Street

Monrovia, California

### TRUTH ABOUT MEDICINES

(Continued from Page 41)

dicinal preparations in *The Journal of the American Medical Association* was limited to those products that had been passed by the Council. The same rule has applied to the other publications of the association, and finally every state medical journal, except those of Illinois and New York, followed this lead. A considerable number of journals not controlled by medical societies also give their support to the Council's work. The medical profession must support the Council or its work will be futile. The members of the Council serve without remuneration and *The Journal of the American Medical Association* tenders to them the thanks and appreciation of the profession that they have so well served.—*Jour. A. M. A.*, February 8, 1930, p. 413.

**Vitamin D in Tuberculosis.**—A recent investigation of the rôle of vitamin D in the management of tuber-  
(Continued on Next Page)

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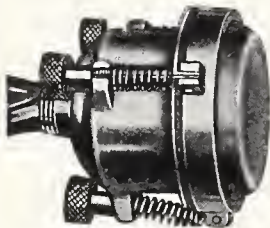
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### TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

culosis indicated that the administration of viosterol did not produce any detectable acceleration of the healing process. These observations suggest that such value as cod-liver oil possesses in tuberculosis does not depend on its relatively high concentration of vitamin D. These studies emphasize the fact that cod-liver oil possesses more than one claim to nutritive value, for it is even richer in vitamin A than in the antirachitic factor. In spite of the enormous antirachitic potency of viosterol, this material is by no means to be regarded as therapeutically equivalent to cod-liver oil.—*Jour. A. M. A.*, February 8, 1930, p. 414.

**The Committee on Foods.**—More than a hundred products, representing the products of numerous manufacturers, have been submitted to the committee, in addition to several national advertising campaigns by cooperative marketing organizations. This cooperation is welcomed by the committee, but obviously has thrown a great burden of work on the committee at the start. Manufacturers have greeted with acclaim the permission to use on packages and in advertising the seal of the committee. Whereas less food is eaten, so far as concerns caloric or energy value, foods have been greatly modified to improve palatability and to provide what are recognized as necessary ingredients in the form of vitamins and mineral salts. It is the hope of the committee that its efforts will give stability to a rapidly growing industry and prevent the sinking of the modern food market in a morass of hokum such as engulfed the drug industry in its developing stages.—*Jour. A. M. A.*, February 8, 1930, p. 415.

**Vigantol Not Accepted.**—"Viosterol" is the name adopted by the Council on Pharmacy and Chemistry

(Continued on Page 46)

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## TRUTH ABOUT MEDICINES

(Continued from Page 44)

for irradiated ergosterol, and "viosterol in oil 100 D" for a solution in vegetable oil having one hundred times the antirachitic potency of a standard cod-liver oil. All of the firms licensed by the University of Wisconsin Foundation to prepare this preparation have agreed to coöperate with the Council on Pharmacy and Chemistry, by using this name, except the Winthrop Chemical Company. The Winthrop Chemical Company has determined to call its product "Vigantol," notwithstanding the fact that the Council has declared that the application of such a proprietary name is contrary to the best interests of the medical profession and the public. The medical profession must support the Council in this type of work if the Council's efforts are to be effective.—*Jour. A. M. A.*, February 8, 1930, p. 415.

**Misbranded Pharmaceuticals.**—During 1929 Notices of Judgment were issued by the Food, Drug and Insecticide Administration of the United States Department of Agriculture against the following pharmaceutical products that were found adulterated or misbranded—or both—under the Food and Drugs Act: Spirits of Nitro (W. H. Crawford Company, Baltimore, Maryland); Damiana Herb (S. B. Penick & Company, Inc., New York City); Combination Tablets (P. H. Mallen Company, Chicago); Alterative Tablets (P. H. Mallen Company, Chicago); Pituitary Extract (Pharmaceutical Products Company, Inc., Easton, Maryland); Phenolphthalein Compound Tablets (P. H. Mallen Company, Chicago).—*Jour. A. M. A.*, February 8, 1930, p. 428.

**EfeDroN Hart Nasal Jelly.**—EfeDroN Hart Nasal Jelly is another one of the ever increasing ephedrin proprietaries. The preparation is made by the Hart

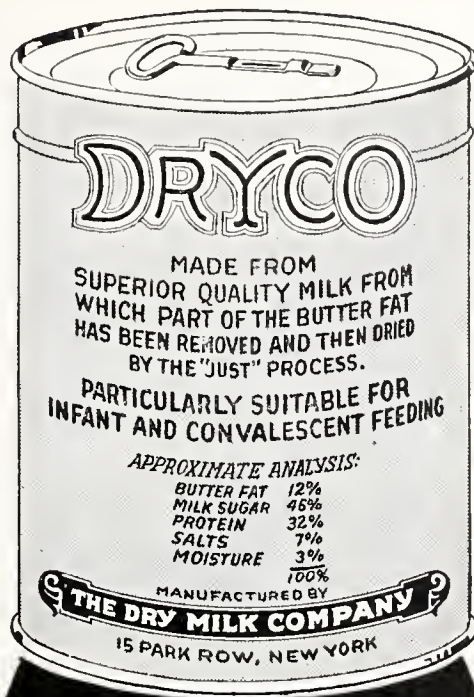
(Continued on Page 48)



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### TRUTH ABOUT MEDICINES

(Continued from Page 46)

Drug Corporation, Miami, Florida. According to the label the formula is: Ephedrine hydrochloride Gr. 1; Chlorbutanol Gr.  $2\frac{1}{4}$ ; Sodium Chloride Gr.  $2\frac{1}{4}$ ; Menthol Gr. 3; Phenol Gr. 2; Oil of Cinnamon Gr. 0.08; Jelly base q. s. ad drachms 5. The preparation has not been accepted for New and Nonofficial Remedies. While physicians' samples of this product have been liberally distributed, the carton is one which seemingly is addressed to the public as well.—*Jour. A. M. A.*, February 8, 1930, p. 430.

**Farastan Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that Farastan is the name under which the Farastan Company, Philadelphia, markets a preparation of iodine and cinchophen claimed to be mono-iodo-cinchophen. The preparation is recommended for use in "Arthritis . . . Rheumatoid and Neuritic conditions." The Council reports that there is no evidence that the routine use of cinchophen and iodine in fixed proportions (or in any proportions) is desirable or rational. Usually, the conditions that require cinchophen do not require the simultaneous administration of the iodides, and vice versa, and that it appears particularly undesirable and even dangerous to encourage the routine prescribing of cinchophen, which should be used only for short periods, with an iodine compound, which must be continued over long periods. The Council declared Farastan unacceptable for New and Nonofficial Remedies because it is an irrational preparation marketed with unwarranted therapeutic claims.—*Jour. A. M. A.*, February 15, 1930, p. 484.

**Antistreptococcus Serum Omitted From New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that for some years it has been questioning the value of antistreptococcus serum

(Continued on Page 52)

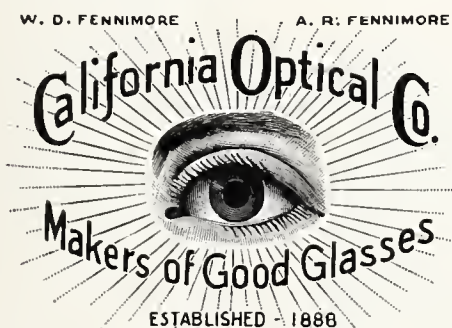


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**The Custom House.**—To most people, the old Custom House in Monterey is the most interesting building on the Pacific Coast. In the earliest days it was not only used for conduct of royal business, but it was a social center for Spanish aristocrats. Here beneath the Spanish flag, pressing matters of state were settled, and gala balls were held. The upper end was built in 1814 by the Spaniards. The center section was built by the Mexicans when they had wrested independence from Spain. In 1846 Commodore Sloat raised an American flag over the building, and the lower end of the Custom House was built by the Americans. First Spanish, then Mexican, then United States property, the Custom House is now owned by the State of California. It is an adobe structure, and in good preservation.

**Colton Hall.**—Here was the cradle of the western empire: the first capitol of California. Commodore Stockton, who succeeded Commodore Sloat, appointed Reverend Walter Colton the alcalde of Monterey. Colton had been chaplain of the historic frigate *Congress*. Later Colton was elected alcalde by the people. Ambitious for a state house, he set about raising funds with typical fervor. Subscriptions, court fines, prison labor, gambling levies—all did their share toward rearing Colton Hall. Here in September, 1849 met the first constitutional convention of California. The city of Monterey now uses this ancient structure—which is in excellent condition—as a City Hall.

**Point Piños Lighthouse.**—Point Piños was named by Vizcaino when he named Monterey in 1602. On this headland, about two miles west of Pacific Grove, is one of the oldest lighthouses of the Pacific Coast. Built about the time of the gold rush, it has long been a beacon of safety to countless mariners.

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### **TRUTH ABOUT MEDICINES**

(Continued from Page 48)

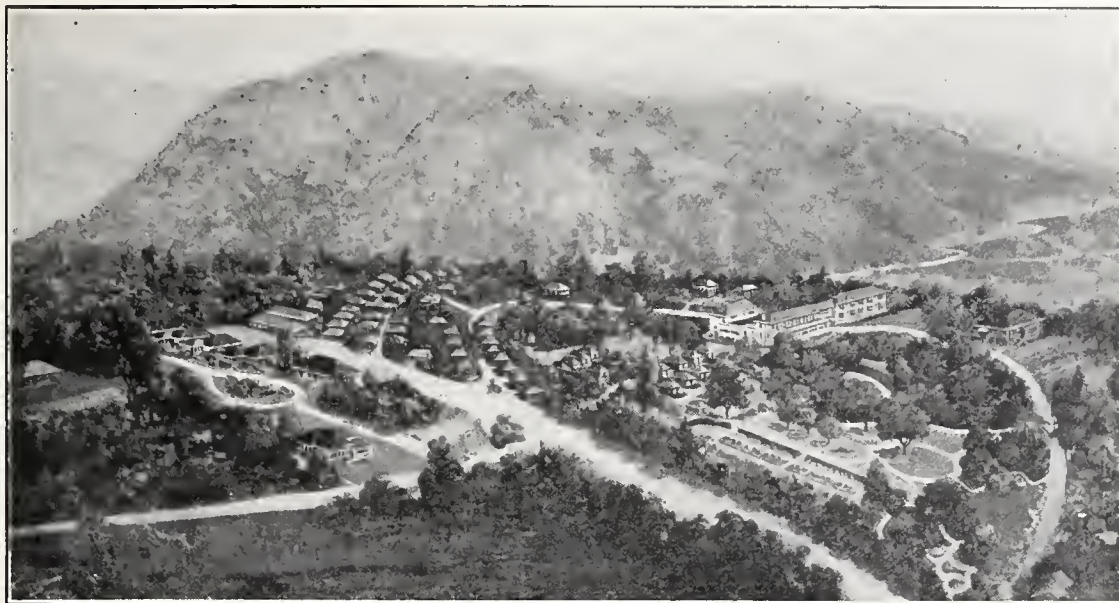
preparations. In 1928 the Council decided that unless new and favorable evidence became available, all streptococcus serum preparations would be omitted from New and Nonofficial Remedies with the close of 1929. Since no such new evidence has become available, the Council has omitted all antistreptococcus serum preparations as follows: Antistreptococcic Serum (Gilliland Laboratories, Inc.); Antistreptococcic Serum, Polyvalent (Lederle Antitoxin Laboratories); Antistreptococcic Serum (Eli Lilly & Co.); Antistreptococcic Serum, Purified and Concentrated (Lilly); Antistreptococcic Serum, Polyvalent (H. K. Mulford Co.); Antistreptococcic Serum (National Drug Co.); Antistreptococcic Serum (Parke, Davis & Co.); Antistreptococcic Serum (Squibb).—*Jour. A. M. A.*, February 15, 1930, p. 484.



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**The Coffey-Humber Cancer Treatment.**—The publicity given through Hearst newspapers primarily, to the Coffey-Humber cancer treatment has brought about the very type of injury to scientific research that was predicted. Regardless of the fact that Drs. Coffey and Humber have made it clear that their work is purely experimental and that they do not claim to have developed a cancer cure, the great trek of cancer sufferers across the continent has begun and physicians everywhere are besought by their patients to procure this remedy.—*Jour. A. M. A.*, February 22, 1930, p. 562.

**Viosterol or Irradiation.**—If rickets is the disorder that is to be cured or averted, both cod-liver oil and irradiated ergosterol, the latter now available as viosterol in oil 100 D, act as specifics; so that irradiation with artificial light sources is not essential though its effectiveness to accomplish the same ends deserves emphasis. Viosterol also serves to promote the proper metabolism of calcium and phosphorus in other disorders. On the other hand, irradiation with ultra-violet rays doubtless produces a variety of physiologic effects about which we are still largely uninformed.—*Jour. A. M. A.*, February 22, 1930, p. 580.

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**California's First Brick House.**—A stone's throw from the old Custom House stands the first brick structure California ever saw. A Virginian named Dickinson built this home from bricks kilned in Monterey. In those days before the gold rush, it was a show spot of Monterey. Like the old adobes, it seems to rest eternally beneath the soft sun and wonder why so many people regard it awesomely. Recently there was torn down in Monterey the first house of milled lumber built in California, brought here by an Australian who did not know trees grew in America.

The Del Monte Gun Club, less than half a mile from the hotel, is a busy spot the year round. A well-equipped field house takes care of the temporary needs of shooters, while eight traps, with shooting positions set in cement, give this club shooting facilities found nowhere else. This club is managed by O. N. Ford, vice-president of the American Trap-shooting Association, and he is always happy to give free instruction to hotel guests who wish to learn the fundamentals of this fascinating sport.

In the Del Monte Forest are to be found two country clubs: Cypress Point and the Monterey Peninsula Club, each with its own golf course and other recreational facilities.

To the south, less than an hour's drive from Del Monte, is the Santa Barbara National Forest, including an untouched wilderness of half a million acres.

Both Monterey and Carmel bays afford excellent sea fishing, with a greater variety of gamey fish than can probably be found anywhere in the world. Among the most prized are king salmon, sea bass, barracuda, tuna, mackerel, perch, sea trout, rock cod, tom cod, smelt, and in the rivers and streams are trout and steelhead. In these same bays are beautiful marine gardens to be viewed from glass-bottomed boats.

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The only Low-Volt Apparatus at a  
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### RELIEVES PAIN INSTANTLY!

Its use is indicated wherever deep penetration is desired; for exercising weak muscles, as in muscular atrophy, intestinal stasis, post-operative adhesions and many other conditions.

Descriptive literature and terms sent on request

*Exclusive Northern California Factory  
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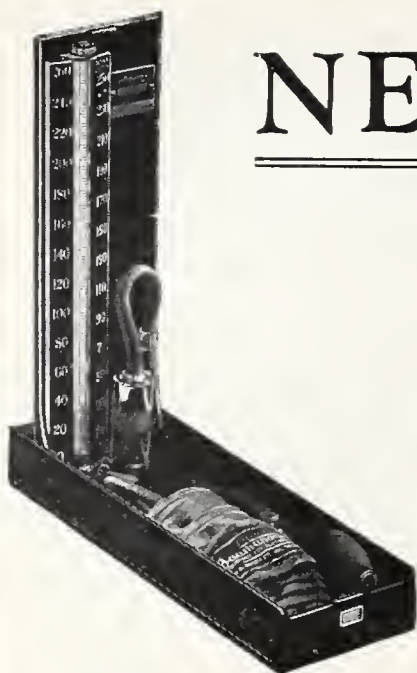
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## KOMPAK MODEL

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**Baumanometer**  
STANDARD FOR BLOODPRESSURE

**T**HE KOMPAK Model is the smallest, lightest and most compact MASTER blood pressure instrument ever made . . . only 30 oz. in weight . . . and because it is a scientifically accurate instrument, it removes every reason or excuse for using *inaccurate* or clumsy blood pressure apparatus.

The KOMPAK Model fits easily into any physician's bag . . . it can actually be carried in the hip pocket.

Compactly encased in Duralumin inlaid with Morocco grained genuine leather, the KOMPAK Model is a Finished Product . . . the Handiest of all types and the most permanent.

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**Amusements to Be Had at Del Monte.**—Del Monte since 1880 has been California's largest and best loved playground. It is known the world over for its natural beauty, its diversity of entertainment, its accessibility, and its open hospitality.

To the east of the hotel, fifty yards away, is the tile and marble outdoor Roman plunge. The salt water is crystal-clear and is warmed just enough to take away the shock of the first dip. Dressing-rooms, showers, and secluded sun-bath patios add to the pleasure of bathers.

Del Monte and golf mean one and the same thing to most Californians. Here California championships are played each September. Here are two unsurpassed golf courses. The old Del Monte course, within five minutes' walk of the hotel, is probably the most popular links on the Pacific Coast.

More than two hundred miles of bridle paths and private motor roads honeycomb the Del Monte Forest.

Both Del Monte and Pebble Beach have well-equipped riding stables with excellent horses and courteous, intelligent riding masters and grooms. Maps of the various woodland trails and beach gallops will be furnished those interested.

**President Hoover Temporarily Bars Importation of Parrots.**—A special news dispatch from Washington, D. C., to the New York *Times* states that an executive order temporarily barring the importation

of parrots into the United States from any country was issued by President Hoover on January 24. The order is designed to check the spread of psittacosis or "parrot fever" and reads as follows:

Restricting for the time being the introduction of parrots into the United States:

Whereas, there has been officially reported in widely separated portions of the United States since the middle of December, 1929, a considerable number of human cases, some of them fatal, of a disease communicated by infected parrots; and

Whereas, there is evidence that such parrots have been introduced from ports outside of the Continental United States; and

Whereas, there exists danger of further such introduction;

Therefore, in order to prevent the further introduction of disease communicable from parrots to human being from ports outside of the Continental United States into the United States, by virtue of the authority vested in me by Section 7 of the Act of Congress approved February 15, 1893, entitled "An act granting additional quarantine powers and imposing additional duties on the Marine Hospital Service," it is ordered that no parrots may be introduced into the United States or any of its possessions or dependencies from any foreign port for such period of time as may be deemed necessary, except under such conditions as may be prescribed by the Secretary of the Treasury. . . .—*Health News*, February 3, 1930.



# APPROVED CLINICAL LABORATORIES

Excerpts from American Medical Association Essentials for an Approved Clinical Laboratory

## DEFINITION

*"\* \* \* A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body."*

*"Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved."*

*"The housing and equipment should be sufficient to permit all essential technical procedures to be properly carried out."*

## THE DIRECTOR

*"The director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry or other allied subjects, for at least three years. He must be a man of good standing in his profession."*

*"The director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work."*

*"The director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports."*

*"The director may have assistants, responsible to him. All their reports, bacteriologic, hematologic, biochemical, serologic and pathologic should be made to the director."*

## RECORDS

*"Indexed records of all examinations should be kept. Every specimen submitted to the laboratory should have appended pertinent clinical data."*

## PUBLICITY

*"Publicity of an approved laboratory should be directed only to physicians either through bulletins or through recognized technical journals, and should be limited to statements of fact, as the name, address, telephone number, names and titles of the director, and other responsible personnel, fields of work covered, office hours, directions for sending specimens, etc., and should not contain misleading statements. Only the names of those rendering regular service to the laboratory should appear on letterheads or other form of publicity."*

## FEES

*"\* \* \* There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group. \* \* \*"*

The following laboratories in California are among those approved by the Council on Medical Education and Hospitals of the American Medical Association:

Clinical Laboratory of Drs. W. V. Brem, A. H. Zeiler and R. W. Hammack,  
Pacific Mutual Building, Los Angeles, California.

Dr. Marion H. Lippman's Laboratory, Butler Building, 135 Stockton Street,  
San Francisco.

The Western Laboratories, 2404 Broadway, Oakland.

These laboratories use only standard methods and are fully equipped with the most modern apparatus to make all clinical examinations of value in: Pathology (frozen sections when ordered), Bacteriology, Chemistry, Hematology, Serology, Medico-legal, Basal metabolism, Blood chemistry, Autogenous vaccines and all other laboratory aids in diagnosis.

Tubes and mailing containers sent on request.

Use special delivery postage for prompt service.

**Annual Meeting**  
*of the*  
**American Association**  
**for the Study of Goiter**  
**SEATTLE, WASHINGTON**

July 10, 11, 12, 1930

**Addresses or Demonstrations**

*will be made by the following (partial list):*

ROY D. McCLURE, Detroit  
 WM. J. KERR, San Francisco  
 J. EARLE ELSE, Portland, Oregon  
 LEWIS M. HURXTHAL, Boston  
 THOMAS M. JOYCE, Portland, Oregon  
 CHARLES T. STURGEON, Los Angeles  
 LEO P. BELL, Woodland, California  
 MARTIN B. TINKER, Ithaca  
 THOMAS O. BURGER, San Diego  
 C. G. TOLAND, Los Angeles  
 JOHN S. HELMS, Tampa  
 C. A. ROEDER, Omaha  
 LeROY LONG, Oklahoma City  
 HAROLD BRUNN, San Francisco  
 ROBERTSON WARD, San Francisco  
 R. J. MELLZNER, San Francisco  
 PHILIP K. GILMAN, San Francisco  
 E. R. ARN, Dayton, Ohio  
 E. STARR JUDD, Rochester, Minn.

*All Physicians Interested in Recent Advances in  
 Knowledge of Diseases of the Thyroid Gland  
 Are Cordially Invited to Attend This Meeting.*

Special Pullman Cars will be attached to the  
 C. and N. W. Canadian National Train leaving  
 Chicago, 5:40 P. M., Wednesday, July 2. Stop-  
 over Thursday night and Friday at Winnipeg  
 for Special Clinics. Stopover Sunday and Mon-  
 day in Jasper National Park. Travel through  
 the Canadian Rockies Tuesday. Arrive in Seattle,  
 July 9.

**Headquarters: OLYMPIC HOTEL**

*Communications relative to this meeting should be  
 addressed to:*

**J. TATE MASON**

*Chairman, Committee on Arrangements*  
**Mason Clinic, Seattle, Washington**

*For use in the Prevention and Treatment  
 of the Acid-Ash Type of . . . . .*

# ACIDOSIS

**California Lima Bean FLOUR!**

*Alkalinity*, of course, neutralizes *acidity*. And  
 Limas are one of the most alkaline foods  
 known—41.65 per 100 grams!

To meet a definite demand from the medical  
 profession, we have developed, to a high degree  
 of fineness, a Lima Bean FLOUR—for making  
 non-acid breads, muffins, pancakes and waffles  
 for Basic Diet menus!

Lima FLOUR is available in 10-lb. bags at  
 \$1.20, and in 100-lb. bags at \$10.00. Upon  
 receipt of price and delivery instructions your  
 order will be shipped parcel post or express col-  
 lect. Send orders, and make check or money  
 order payable to—

**CALIFORNIA LIMA BEAN  
 GROWERS ASSOCIATION**

*Oxnard, California*

**How Sir Luke Fildes Painted "The Doctor."**—The  
 death of Sir Luke Fildes, R. A., who painted the  
 famous picture, "The Doctor," was announced some  
 little time ago. How the painter of this much ad-  
 mired masterpiece brought it into being is related in  
 an illustrated interview which appeared in the *Strand*  
*Magazine* (London, 1893, pp. 111-127).

It appears that Mr. Fildes loved to paint the people,  
 the country folk—to paint them as they were, histori-  
 cally and artistically. "The Doctor" was intended as  
 a portrait of the English physician of 1890 in a home  
 of that period where a little child lay desperately ill.  
 The surroundings were such as the artist had sketched  
 in his journeys from Devon to Inverness to get the  
 character of the people and the general background  
 for the picture. The cup and basin and odds and ends  
 in furnishings were purchased during these wander-  
 ings. He sketched many interiors in cottages and  
 fishers' huts and then returned home and built exactly  
 to size in the end of his studio the one he wanted for  
 his picture. It was a most substantial structure, even  
 the massive rafters were there.

The lamp was lighted and the rays of early dawn  
 were coming in through the windows. For the child  
 Mr. Fildes took his own little boy, Geoffrey, and  
 described the happening as follows to Harry How,  
 author of the interview in the *Strand Magazine*:

When he wanted his morning sleep he used to be  
 brought up to the studio. The nurse would watch him  
 as he lay on the chairs. As he slept I painted. You  
 see the hand falling down by the side helplessly?  
 One day, I had just finished the picture with the  
 child's hands tucked up close together at the neck, as  
 children sleep, when I noticed my boy's hand fall  
 over the side. I thought it exquisite—so pleading and  
 pitiful. I altered the hands in the picture at once, and  
 painted the left one as you see it now.

The artist had difficulty in securing as a model for  
 the doctor a person with the decision of manner that



## TWIN PINES

BELMONT, CALIFORNIA

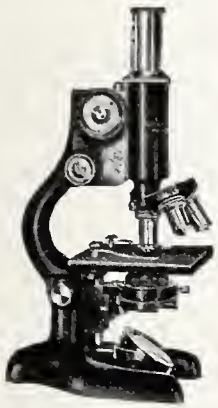
**A Sanatorium for Nervous  
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### THE NEW FFS-8 PHYSICIAN'S MICROSCOPE

with Rack and Pinion Substage and Divisible Abbe Condenser with 16 mm., 4 mm. and 1.9 mm. Oil Immersion Objectives, 2 Eyepieces and triple revolving Nosepiece. Complete in hardwood carrying case

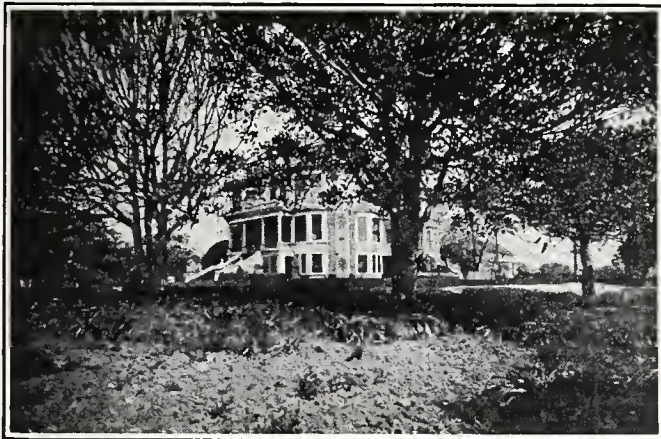
**\$120.00**

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### The Anderson Sanatorium

*For Mental and Nervous Diseases*

**Hydrotherapy Equipment**

Open to any member of the State  
Medical Society

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Telephone Fruitvale 488

he had in mind, and so he levied freely on five or six of his friends for a feature resembling his ideal and got them to sit for him. He said this picture had remained in his mind for a very long time, though eventually it proved the quickest painted of any he had ever done.

He received many letters asking for the name of "The Doctor," one being from a lady who was ill and who asked for his address, saying that if she only had a doctor like him to attend her she felt sure she would soon be restored to health.—*Health News of New York*.

**Concoctions Claiming to Contain Radium Are Fakes in Many Cases.**—"Highly exaggerated claims, evidently designed to mislead the purchaser, are made for many alleged radioactive products," says J. W. Sale, an expert of the United States Food, Drug, and Insecticide Administration, the organization of the

Department of Agriculture charged with the enforcement of the Federal Food and Drugs Act.

In order to obtain a minimum daily dosage of radioactivity it would be necessary to drink 1957 gallons of water each day, in the case of one of the alleged radioactive waters examined.

Action is being taken under the Federal Food and Drugs Act against alleged radioactive products which are falsely or fraudulently misbranded under the terms of the law. Many have already been removed from the channels of trade and others are under investigation.

Although most of the products are found to be deficient in radium, they might be dangerous if they contained too much, says Mr. Sales. Radium in active dosage can do harm as well as good and should be administered with great caution.—*United States Department of Agriculture*, February 4, 1930.



## LA VIDA Mineral Water

LA VIDA MINERAL WATER is a natural, palatable, alkaline, diuretic water, indicated in all conditions in which increased alkalinity is desired. It flows hot from an estimated depth of 9,000 feet at Carbon Canyon, Orange County, 30 miles from Los Angeles.

The salts in LA VIDA form a part of "the infinitely lesser chemicals" of which the human body contains only an exceedingly small amount, but which play a vital part in maintaining good health.

An outstanding American medical authority states: "You have the nearest approach of any water in the United States (or perhaps in the world) to the celebrated Celestins Vichy of France\* . . . there is no water in this country like La Vida." (Name on request.)

The cost of LA VIDA is well within the reach of the average patient.

### IONIZATION

There is an important difference between *natural* and manufactured waters. Only in natural waters does complete ionization of mineral salts take place.

### PRICES

*Plain:* \$2.00 per case (4 gal.)

*Carbonated:* \$2.00 per dozen  
(12 oz.) bottles

*Tonic Ginger Ale:* \$2.25 per doz.  
(12 oz.) bottles

### \*CHEMICAL ANALYSIS GRIFFIN-HASSON LABORATORIES

	LA VIDA	Celestins VICHY of France
Grains per gallon		
Calcium Bicarbonate	3.74	43.28
Magnesium Bicarbonate	0.98	5.00
Sodium Bicarbonate	252.6	205.53
Sodium Chloride	94.0	21.94
Iron Oxide	0.07	Trace
Aluminum Oxide	0.13	
Silica	6.42	2.63
Arsenic	0.001	
Sodium Sulphate		14.97
<b>TOTAL</b>	<b>357.941</b>	<b>293.35</b>

*FREE to Physicians in Hospitals in  
Southern California*

We will gladly send you without cost or obligation, a full case (4 gallons) of LA VIDA MINERAL WATER, six bottles of LA VIDA CARBONATED WATER, and six bottles of LA VIDA TONIC GINGER ALE.

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## FOUR FIFTY SUTTER

San Francisco's largest medical-dental building designed and built exclusively for physicians, dentists and affiliated activities.

The 8-floor garage for tenants and the public is the West's largest—holding 1000 cars.



Four-Fifty Sutter St. San Francisco

**Robert Louis Stevenson House.**—Here is one of America's most loved shrines. Stevenson, attracted here from Europe by the woman who became his wife, started his many Peninsula jaunts from this old building. In this great old adobe, Stevenson began "The Amateur Emigrant," wrote "The Pavilion on the Links" and his essay on Thoreau. From this home, Stevenson explored the Peninsula, and gathered site descriptions for later books, such as "Treasure Island." This literary memorial is said to be visited by more people annually than any other in the world, save only Shakespeare's home at Stratford-on-Avon.

**Points of Interest Around Monterey.**—Monterey, with its wonderful natural seaside and forest scenery, ideal climate that varies for an average of only ten degrees winter and summer, assortment of countless historic and romantic points of interest and developed recreations and business, attracts thousands of visitors at all seasons of the year.

You will find much of interest in this city of historical romance, whether you come for pleasure or business. For your information a few of the points of interest are: World-famous seventeen-mile drive. Colton Hall, where the constitution of California was written. Old Custom's House, which has flown the flags of Spain, Mexico, and the United States. Home of beloved Robert Louis Stevenson. First Brick House in California. San Carlos Mission. Carmel Mission. Quaint adobes, relics of Spanish and Mexican regimes. First theater, where Jenny Lind sang. Presidio of Monterey, where is stationed the 11th U. S. Cavalry and the 76th Field Artillery. The landing place and monument to Father Junipero Serra. The monument to Commodore Sloat, who first raised the American flag over the Custom House, July 7, 1846, making California a part of the United States.



**MILK of MAGNESIA***plus* **MINERAL OIL***exerts Lubricant — Laxative — Antacid action and effect*

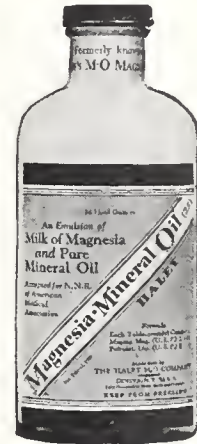
Perfectly emulsified, palatable, unflavored, producing no disturbance of digestion, rarely if ever inducing "leakage,"

**Magnesia-Mineral Oil (25)****HALEY***formerly HALEY'S M-O, Magnesia Oil,*

is indicated and has been endorsed as effective and satisfactory by thousands of physicians in the treatment of Gastro-intestinal Hyperacidity, Fermentation, Flatulence, Gastric or Duodenal Ulcer, Constipation, Autotoxemia, Colitis, Hemorrhoids, before and after operation, during pregnancy or maternity, in infancy, childhood and old age and by dentists as an **EFFECTIVE ANT-ACID MOUTH WASH.**

Accepted for N.N.R. by the A.M.A. Council on Chemistry and Pharmacy.

*Generous sample and literature on request*

**THE HALEY M-O COMPANY, INC., GENEVA, N. Y.****FORMULA**

Each Tablespoonful  
Contains Magma  
Mag. (U.S.P.) dram  
iii, Petrolat. Lig.  
(U.S.P.) dram i.

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**We Still Retain Our Independence and Continue to Serve You as in the Past**

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**T**HE medicinal value of the glands of internal secretion was not recognized.

But times have changed, as well as cattle. Now, the therapeutic value of certain gland products is definitely established and each year adds to our knowledge in this important field of therapeutics.

To the physician prescribing gland products we urge specification of "Wilson," because it connotes a product made at the source of supply from fresh glands, processed promptly, with the aim of conserving maximum hormone activity, in a laboratory devoted exclusively to the endocrine field.



"This mark

**THE WILSON LABORATORIES**

your guarantee"

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*Manufacturers of*  
**STANDARDIZED ANIMAL DERIVATIVES,  
LIGATURES and DIGESTIVE FERMENTS**

## Johnston-Wickett Clinic

ANAHEIM, CALIFORNIA

*Departments*—Diagnosis, Surgery, Internal Medicine, Gynecology, Urology, Eye, Ear, Nose, Throat, Pediatrics, Obstetrics, Orthopedics, Radiology and Pharmacy.

Laboratories fully equipped for basal metabolism determinations, Wassermann reaction and blood chemistry, Roentgen and radium therapy.

**Fewer Deaths From Tuberculosis.**—During the first nine months of the year 1929 there were 4515 deaths from tuberculosis in California. During the corresponding period of the preceding year there were 4568 deaths from this disease. In 1928 there were 6074 deaths from tuberculosis, and it is anticipated that the total number of deaths in 1929 will not be more than 6000. This indicates that the mortality rate per hundred thousand population for 1929 will probably be about 135, as against a rate of 139.7 for the year 1928. The population in California increases by about one hundred thousand each year and the reduced number of deaths, together with the natural increase in the population, works to advantage in making a low mortality rate for the year 1929.

The California tuberculosis death rate has dropped consistently since 1906. In that year the rate was 221.8 per hundred thousand population. In 1920 it was 155 per hundred thousand population. Out of the 6074 persons in California who died of tuberculosis last year, 3004 had lived in California for ten years and over, 1260 had lived here five to nine years, 894 one to four years, and 453 had lived in the state for less than one year.

It is generally recognized that most cases of tuberculosis are contracted in infancy, but do not develop into acute cases of the disease until the strains and stresses of later life bring on the acute symptoms of the disease. For this reason the work of the preventoria is of the utmost importance. Children who may be predisposed to tuberculosis, or whose parents may be tuberculous, should be given every possible provision for the development of good general health, in order to offset the possible development of tuberculosis. The tendency of the organizations working for the prevention of tuberculosis to develop preventoria for children is generally regarded as one of the most important activities in tuberculosis prevention.



# Colfax School for the Tuberculous

*Colfax, California*

(Altitude 2400 feet)

This institution is for the treatment of medical tuberculosis and of selected cases of extrapulmonary (so-called surgical) tuberculosis.

The Colfax School for the Tuberculous consists of five Hospital Units with beds for patients who come unattended and a Housekeeping Cottage Colony for patients and their families.

The Colfax School for the Tuberculous offers the following advantages:

1. Patients are given individual care by experienced tuberculosis specialists. The patient is treated according to his individual needs.
2. Patients are taught how to secure an arrest of their disease, how to remain well when once the disease is arrested, and how to prevent the spread of the disease.
3. Patients have the advantage of modern laboratory aids to diagnosis and of all modern therapeutic agencies.
4. The climate of Colfax enables the patient to take the cure without discomfort twelve months in the year. We believe climate is secondary to medical supervision and rest, but the fact remains that it is easier to "cure" under good climatic conditions than where these climatic conditions are absent.
5. Colfax is accessible. It is on the main line of the Ogden Route of the Southern Pacific R. R. and has excellent train service. It can be reached by paved highway, being on the Victory Highway, with paved roads all the way to Colfax.

*For further information address*

ROBERT A. PEERS, M. D., *Medical Director*  
*Colfax, California*

# Erythrol Tetranitrate Merck

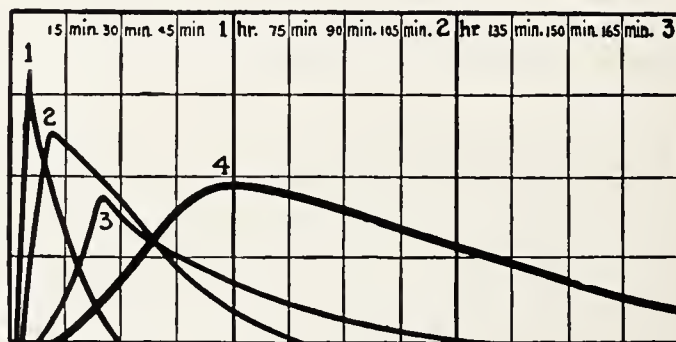
*Literature on request*

Chart shows relative reduction of pulse tension produced by

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2. Nitroglycerin
3. Sodium Nitrite
4. Erythrol Tetranitrate

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## Effective Vasodilator

Useful in Angina Pectoris, vascular diseases, and as a prophylactic for anginal pain.

Tablets— $\frac{1}{4}$  grn. Bottles of 50

Tablets— $\frac{1}{2}$  grn. Tubes of 24  
and Bottles of 100

**"Great Men's Weakness."**—The magazine *Time*, in various issues, devotes space to medicine. In the issue of December 23, there is an article entitled "Great Men's Weakness," which begins: "Prince Bismarck, President Wilson, President Harding, 'Tiger' Clemenceau, Napoleon III and Alexander Dumas fils had only one weakness in common: prostatic hypertrophy."

The article is illustrated with pictures of Wilson, Bismarck, and three fellow sufferers, Poincaré, King Haakon of Norway, and King Fuad of Egypt. Reference is also made to the following notables who have prostatic hypertrophy: Irigoyen of Brazil, King George of England, President Doumergue of France, and President Masaryk of Czechoslovakia.

In discussion of the condition itself, the article contains the following references. "Authorities estimate that one of three males over sixty suffer from prostatic hypertrophy. Gonorrhea in early manhood is a frequent but by no means the sole cause." This reference is amplified by the following footnote: "Dr. Winfield Scott Pugh, famed Manhattan genito-urinary specialist, estimates that four out of five males have or have had gonorrheal infections."

Organized medicine is the greatest proponent of lay education, but under proper medical supervision and control, in order that the public may intelligently be advised in regard to health matters.

No one can read an article of this kind without resentment. The imputation is most insulting. What inference can be drawn by readers of this reference other than the fact that gonorrhea is the most frequent cause, notwithstanding the qualifying statement "but by no means the sole cause." Readers who have relatives or friends suffering from hypertrophied prostate naturally will do some deep thinking. Again, we repeat, this kind of lay education is vicious, and to be unqualifiedly condemned.—*The Pennsylvania Medical Journal*.

**Rodent Survey Activities.**—The State Department of Public Health is active in determining the presence of infected rats and ground squirrels throughout California. During the past two years, the Division of Sanitation has collected 31,513 ground squirrels and 27,646 rats, upon all of which postmortem examinations were made. Most of these examinations were carried on in the field, only such animals as showed gross signs of infection being shipped to the laboratory for microscopical examination. These surveys have covered nineteen counties and, in addition, rodent control work has been carried on, under the supervision of the State Department of Public Health, during the past two years, in forty-two cities and towns scattered throughout California.

### RODENT SURVEY ACTIVITIES

Two Years, 1928-1929

Number of counties in which surveys were made.....	19
Number of ground squirrels collected.....	31,513
Number of rats collected.....	27,646
Number of postmortem examinations.....	59,159
Number of cities and towns in which rodent control work was carried on under supervision of State Department of Public Health.....	42

**Deaths in California and the United States Registration Area.**—A comparison of California death rates for the year 1928 with similar rates for the United States Registration Area (which comprises most of the states) indicates a lower ratio of California deaths from most of the communicable diseases (with the exception of tuberculosis). A larger proportion of California individuals, however, died of those diseases which commonly claim the lives of people who are past middle age. In other words, California last year made marked progress in saving the lives of its children from death by communicable diseases, but, according to the records, progress was not made in the prevention of deaths of adults from cancer, heart disease, nephritis, and other causes.





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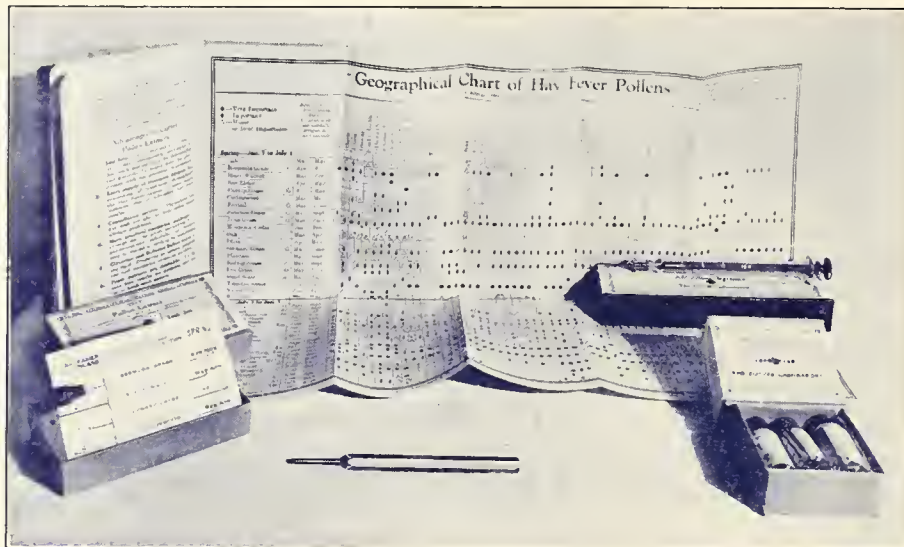
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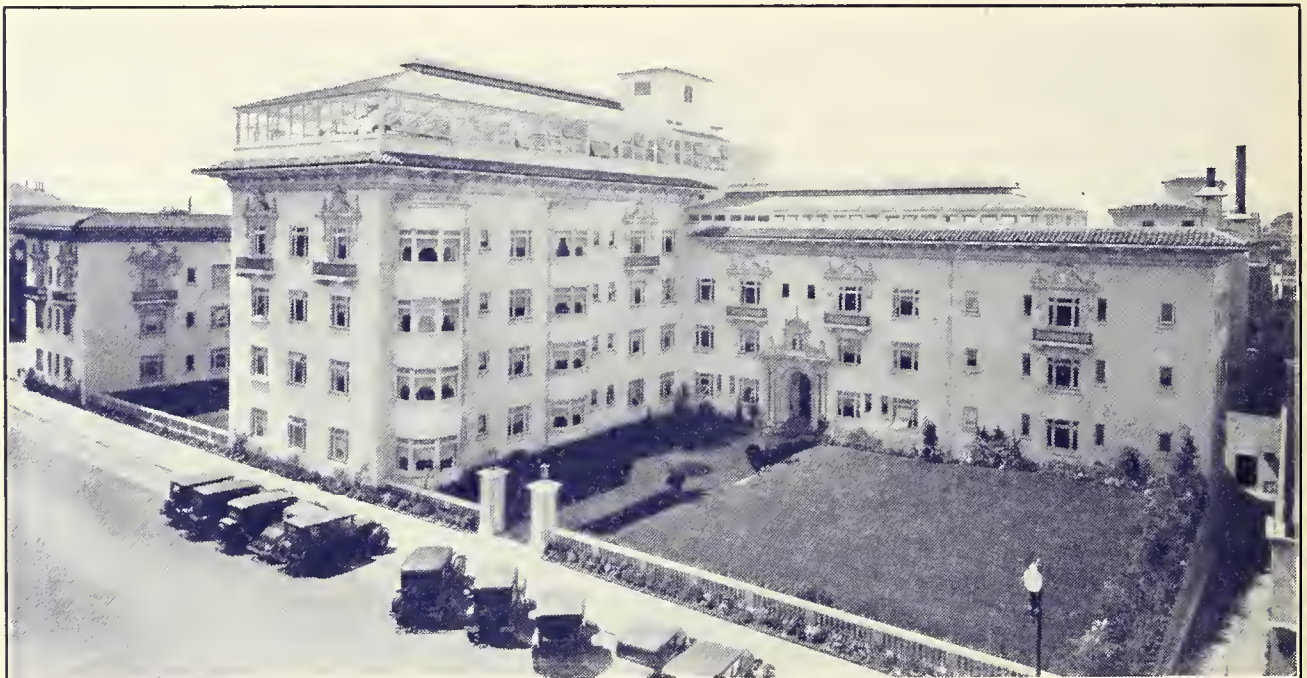
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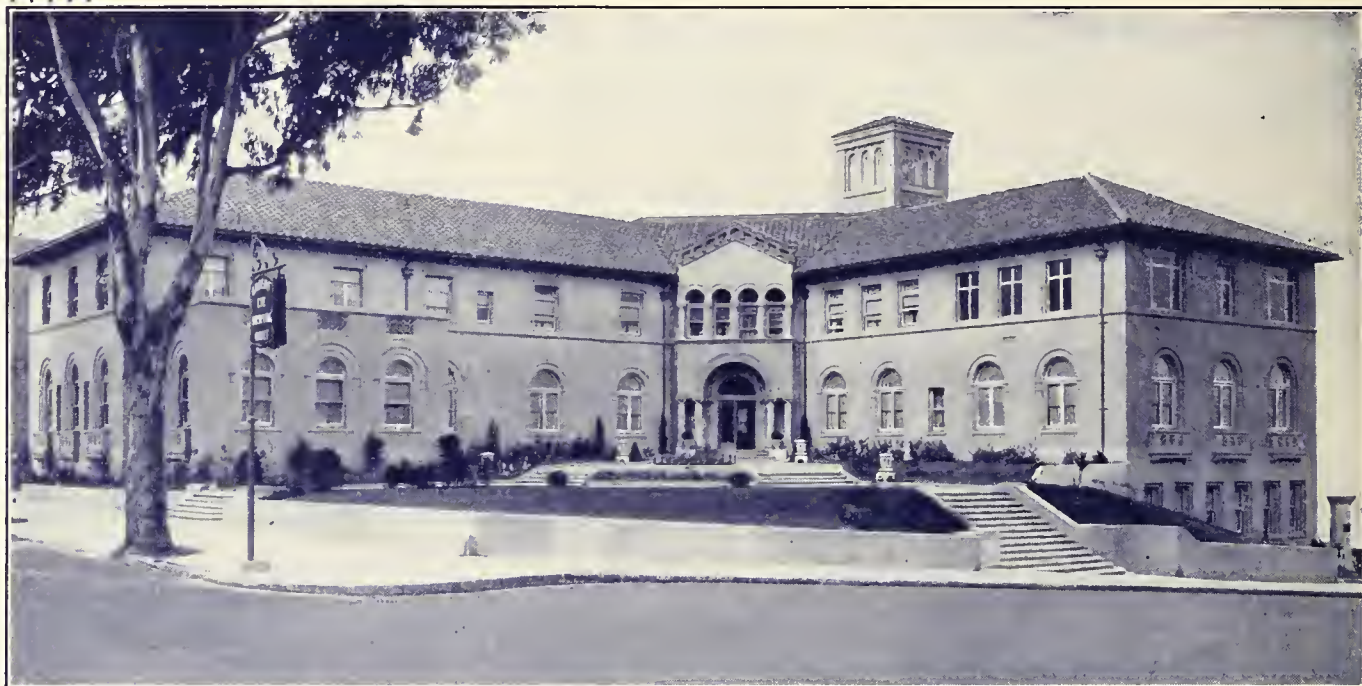
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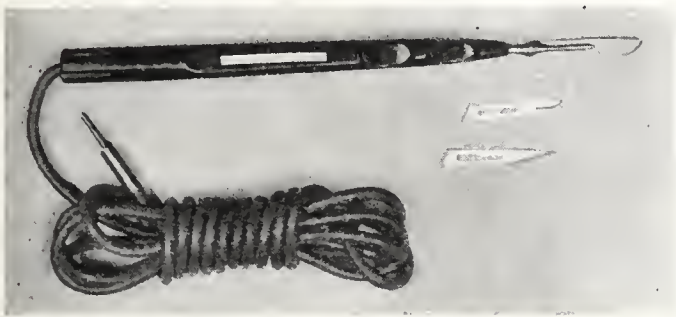


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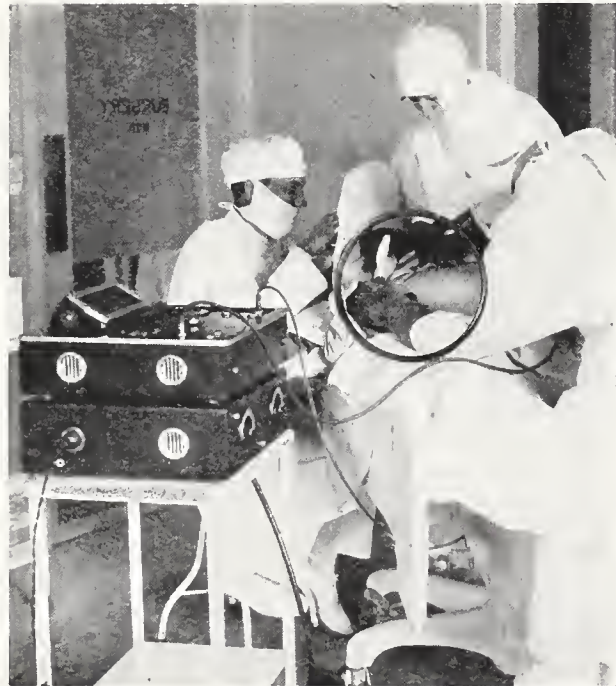


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*\*Archives of Pediatrics, October, 1929.*



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President, G. E. Ebright, San Francisco.  
Director, Walter M. Dickie, Berkeley.

**State Board of Medical Examiners**  
San Francisco, 623 State Building  
Los Angeles, 821 Associated Realty Bldg.,  
510 West Sixth Street  
Sacramento, 420 State Office Building  
President, P. T. Phillips, Santa Cruz.

Secretary, C. B. Pinkham, 623 State Building, San Francisco.

**Southern California Medical Association**  
President, Joseph K. Swindt, Pomona.  
Secretary, William J. Norris, 509 Medical Office Bldg., 1136 W. 6th Street, Los Angeles.

**California Northern District Medical Society**  
President, J. D. Lawson, Woodland Clinic, Woodland.  
Vice-President, Dan H. Moulton, Chico.

Secretary, Albert K. Dunlap, Sacramento Hospital, Sacramento.  
Treasurer, Walter E. Bates, Davis.

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M. M. CRITCHLOW, Salt Lake City.....	Secretary	Associate Editor for Utah
		Place of next meeting.....Salt Lake City, September 9-11, 1930

## Hospitals and Sanatoriums

The institutions here listed have announcements in this issue of CALIFORNIA AND WESTERN MEDICINE

<b>ALEXANDER SANITARIUM</b> Nervous and Mild Mental Diseases Belmont, Calif.	<b>FRANKLIN HOSPITAL</b> Limited General Hospital Fourteenth and Noe Streets, San Francisco	<b>SAN FRANCISCO HOME FOR INCURABLES, AGED AND SICK</b> 2750 Geary Street, San Francisco
<b>ALUM ROCK SANATORIUM</b> For Treatment of Tuberculosis San Jose, California	<b>GREENS' EYE HOSPITAL</b> Consultation, Diagnosis and Treatment of Diseases of the Eye Bush and Octavia Streets, San Francisco	<b>SANTA BARBARA CLINIC</b> 1421 State Street, Santa Barbara
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<b>COLFAX SCHOOL FOR THE TUBERCULOUS</b> For the Treatment of Tuberculosis Colfax, Calif.	<b>OAKS SANITARIUM</b> For the Treatment of Tuberculosis Los Gatos, Calif.	<b>ST. MARY'S HOSPITAL</b> General Hospital 2200 Hayes Street, San Francisco, Calif.
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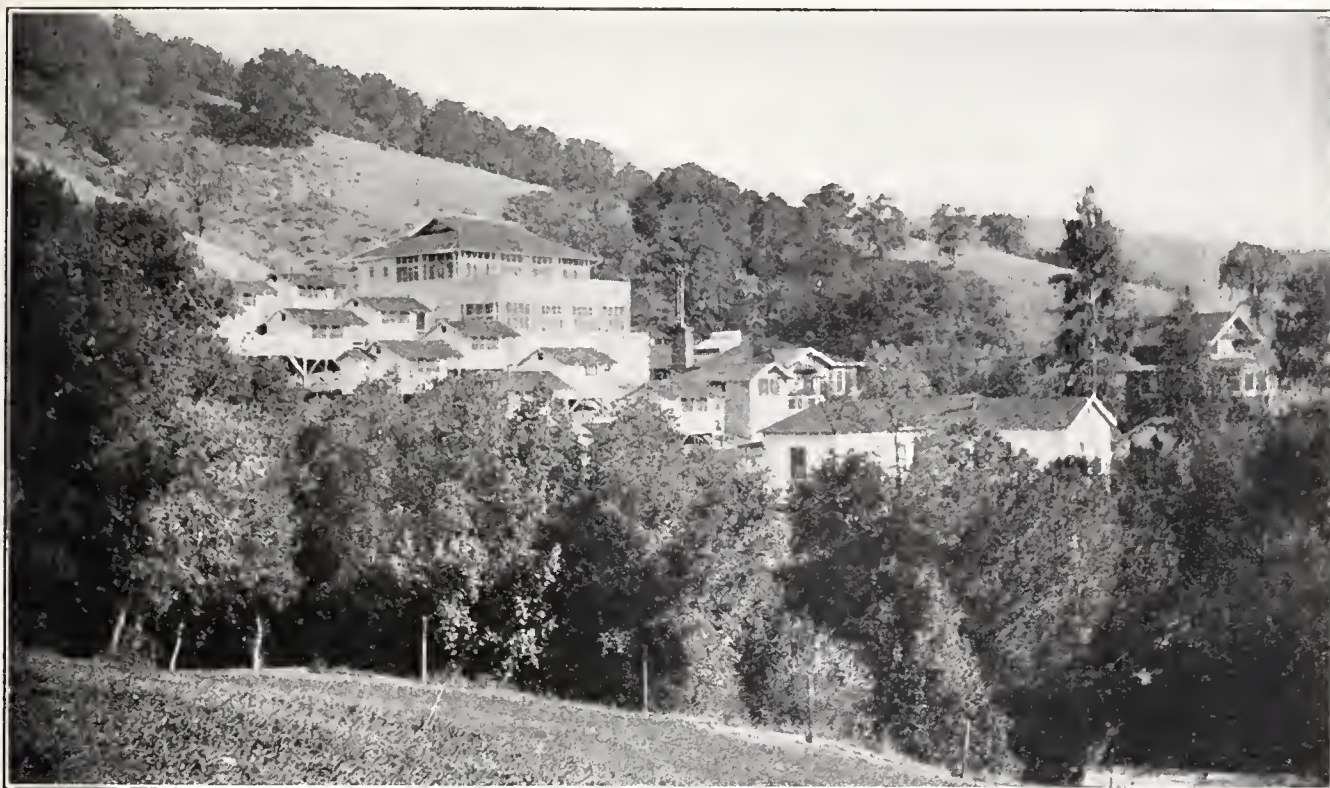
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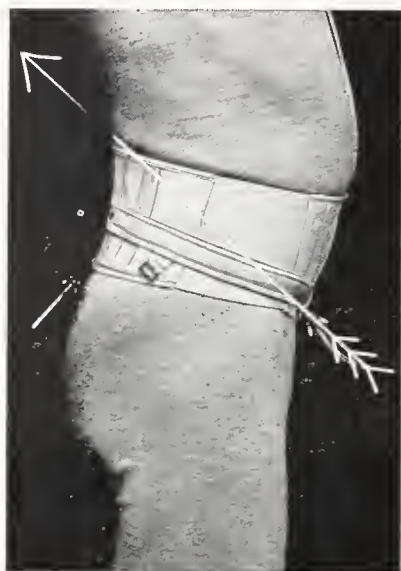
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## BOOK REVIEWS

List of Books Received

### BOOKS RECEIVED

**Trauma, Disease, Compensation.** A Handbook of Their Medico-Legal Relations. By A. J. Fraser, M. D., Chief Medical Officer, Workmen's Compensation Board, Winnipeg. Cloth. Pp. 524. Price, \$6.50 net. Philadelphia: F. A. Davis Company, 1930.

**The Treatment of Skin Diseases in Detail.** Principles and Practice of Dermatology. Volume III. By Noxon Toomey, M. D., late Instructor in Dermatology, St. Louis University. Cloth. Pp. 512. Price, \$7.50. St. Louis: The Lister Medical Press, 1930.

**United States Naval Medical Bulletin.** Published quarterly for the information of the Medical Department of the Navy. Issued by The Bureau of Medicine and Surgery, Navy Department, Division of Planning and Publications, Captain W. Chambers, Medical Corps, U. S. Navy, in charge. Edited by Lieutenant Commander Robert P. Parsons, Medical Corps, U. S. Navy. Compiled and published under the authority of Naval Appropriation Act for 1930, approved March 2, 1929. Paper. Pp. 522. Washington: Government Printing Office, 1930.

**The Normal Diet.** A Simple Statement of the Fundamental Principles of Diet for the Mutual Use of Physicians and Patients. By W. D. Sansum, M. S., M. D., F. A. C. P., Director of the Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara. Third revised edition. Cloth. Pp. 134. Price, \$1.50. St. Louis: The C. V. Mosby Company, 1930.

**The Modern Hospital Year Book.** Tenth edition. The Hospital Reference Book. An Annual Reference Volume on the Building, Equipment, Organization and Maintenance of Hospitals and Institutions. Cloth. Pp. 973. Price, \$2.50. Chicago: The Modern Hospital Publishing Co., Inc., 1930.

**Venereal Disease.** Its Prevention, Symptoms and Treatment. By Hugh Wansey Bayly, M. C., Hon. Sec. Society for the Prevention of Venereal Disease. Fourth (American) edition, with three colored plates and seventy-four illustrations in the text. Cloth. Pp. 242. Price, \$3.50 net. Philadelphia: F. A. Davis Company, 1930.

**Varicose Veins.** With Special Reference to the Injection Treatment. By H. O. McPheeters, M. D., F. A. C. S., Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital. Second revised and enlarged edition. Cloth. Pp. 233, illustrated with half-tone and line engravings. Price, \$3.50 net. Philadelphia: F. A. Davis Company, 1930.

**Normal Facts in Diagnosis.** By M. Coleman Harris, M. D., Lecturer on Physical Diagnosis, New York Homeopathic College and Flower Hospital and Benjamin Finesilver, M. D., Lecturer on Diseases of the Nervous System, New York Homeopathic Medical College and Flower Hospital, New York City. Cloth. Pp. 247, illustrated with forty-two engravings, some in colors. Price, \$2.50 net. Philadelphia: F. A. Davis Company, 1930.

**Modern Otology.** By Joseph Clarence Keeler, M. D., F. A. C. S., Associate Professor of Otology, Jefferson Medical College. Cloth. Pp. 858, with ninety original illustrations and fifteen colored plates. Price, \$10 net. Philadelphia: F. A. Davis Company, 1930.

### BOOK REVIEWS

**A Primer for the Tuberculous and Other Essays on Tuberculosis.** By Robert A. Peers, M. D. Pp. 324. Illustrated. San Francisco: The James H. Barry Company, 1930. Price \$3.50.

"A book designed for the layman, although it is hoped that it may be read with interest by members of the medical profession."

This modest preface introduces a series of absorbingly interesting essays written for the instruction and cheer of tuberculous patients—reliable information in simple language regarding tuberculosis as a disease entity, and as an economic problem.

Equally valuable to the patient, the family and the doctor, this "Primer for the Tuberculous" should be available in every home touched by tuberculosis, in every tuberculosis sanatorium and in the office of every doctor, for none escape contact with some manifestation of this ubiquitous disease. A book to recommend or to lend with full assurance of its helpfulness and veracity.

E. W. P.

(Continued on Next Page)



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**BOOK REVIEWS**

(Continued from Preceding Page)

**Clinical Obstetrics.** By Paul T. Harper. Pp. 629. Illustrated. Philadelphia: F. A. Davis Company. 1930.

This book attracts the attention at once and holds it throughout. It is different and has an unusual personality.

The author uses simple language—in short sentences and paragraphs. His major premise is that in order to understand the mechanics of labor, one must be able to "see" what is going on. Since actual vision is impossible in all but a very few phases of parturition, visualization has to be resorted to. This is accomplished by the use of a series of very original diagrammatic drawings, which show the different conditions and situations as they develop, and then in like manner show their solutions.

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A knowledge, by the reader, of the fundamentals of obstetrics is taken for granted, but the clinical and medical aspects of the subject are all considered in sufficient detail to make a very complete though brief work. It could be to the obstetrician very much as plans and specifications are to the builder.  
K. L. S.**A Practical Treatise on Disorders of the Sexual Function in the Male and Female.** By Max Huhner. Third edition. Pp. 342. Philadelphia: F. A. Davis Company. 1929. Price \$3.

Doctor Huhner gives a very good and complete classification of the sexual disorders. It is a book that can be highly recommended to the general practitioner, in fact the author brings out the important truth that many a physician regards a man's sexual complaint as insignificant and wonders why that patient falls into the hands of the quack.

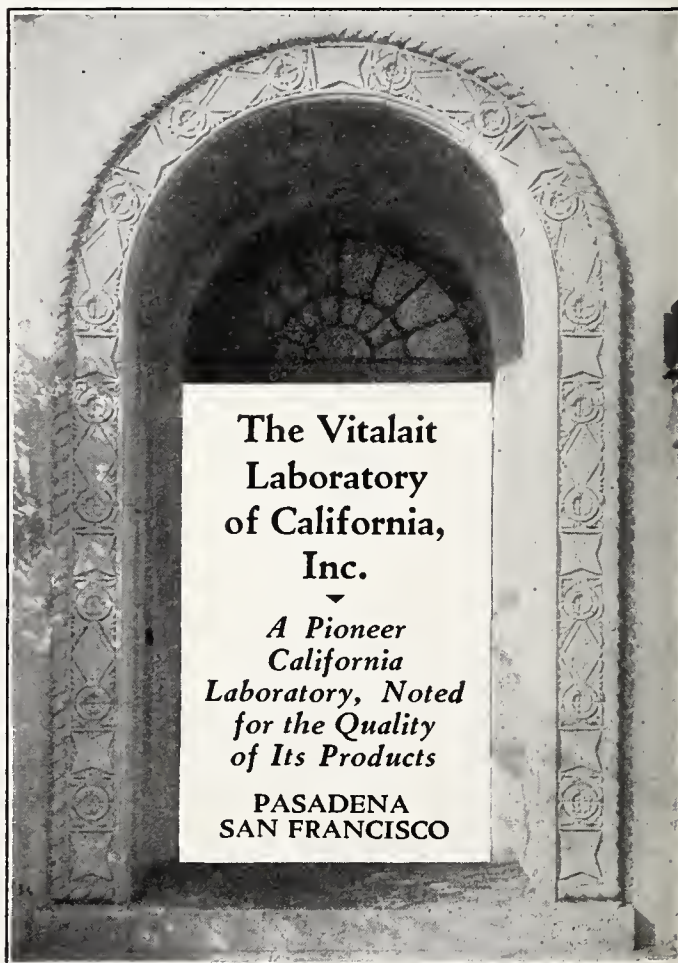
The treatments for masturbation and coitus interruptus are particularly well outlined. One can obtain a clear conception of the differences in the nervous mechanism between normal coitus, impotence and pollutions, from the author's analysis of Groag's diagrammatic schemes.

The book gives many helpful suggestions to the genito-urinary specialist and can be recommended as a valuable addition to his reference library.  
M. V.**The Treatment of Varicose Veins of the Lower Extremities by Injections.** By T. Henry Treves-Barber. Pp. 120. Illustrated. New York: William Wood and Company. 1929. Price \$2.25.

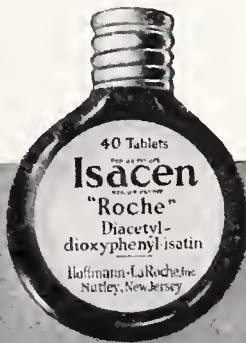
This monograph, like many British medical books, is characterized by its minute attention to detail and by the excellence of its literary style. No space is wasted in descriptions of obsolete surgical procedures, but every possible angle of the modern injection technic is fully dealt with. The important subject of the prevention and treatment of complications is taken up in a refreshingly

practical manner, and the list of contraindications is shorter than usual, as it should be. Some interesting new concepts are introduced in the sections on classification and etiology, subjects which are often poorly discussed in the literature. The author's injection technic is excellent, and he wisely reserves the standing posture for the insertion of the needle in difficult cases, his injections being made with the patient recumbent. He has never

(Continued on Page 14)







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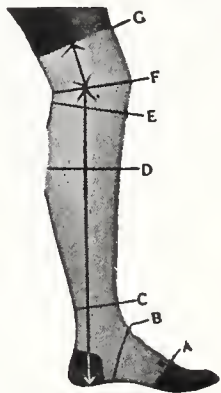
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## BOOK REVIEWS

(Continued from Page 12)

used tourniquets, which many have found useful, and apparently also dispenses with the elastic bandage. He uses sodium chlorid solution exclusively in his work, and seems to regard the intense cramp which it produces as a beneficent effect. He states that mercurial solutions (biniodid) should only be given to syphilitic subjects, although we now know that syphilitics are no more tolerant of mercury than normal individuals. The various sugar solutions are not mentioned, but he condemns the use of arsphenamin for this purpose, a practice unheard of in America. The American reader will stumble over an occasional unfamiliar word, e. g., phlyctena, lipothymia, but otherwise this little treatise makes most pleasant and profitable reading.

H. S.

**The Volume of the Blood and Plasma in Health and Disease.** By Leonard G. Rowntree and George E. Brown, with the technical assistance of Grace M. Roth. Pp. 219. Illustrated. (Mayo Clinic Monographs.) Philadelphia and London: W. B. Saunders Company. 1929. Price \$3.

This work is a brief but thorough review of the present status of blood volume studies. The subject is presented in a clear and logical manner. The authors prefer the dye method of blood volume determination because it is more practical for clinical application and more accurate than the other methods proposed.

Blood volume of a group of normal individuals was first determined and this standard used for comparison with the findings in various diseases.

The practical value of blood volume estimation will undoubtedly increase with time and its greater use.

An illustration of the importance of blood volume studies in our understanding of certain diseases is pointed out by the authors in discussing hypertension. They find a decreased blood volume in hypertension showing that the vascular bed is probably too small for the amount of blood in the body rather than that the blood volume is increased above the normal.

N. E.

**Practical Massage and Corrective Exercises With Applied Anatomy.** By Hartvig Nissen. Fifth edition. Pp. 271. Illustrated. Philadelphia: F. A. Davis Company. 1929. Price \$2.50.

In this revised edition the author has given us the essentials of massage technic mellowed by his extensive experience. The presentation is clear, well arranged and

(Continued on Page 19)



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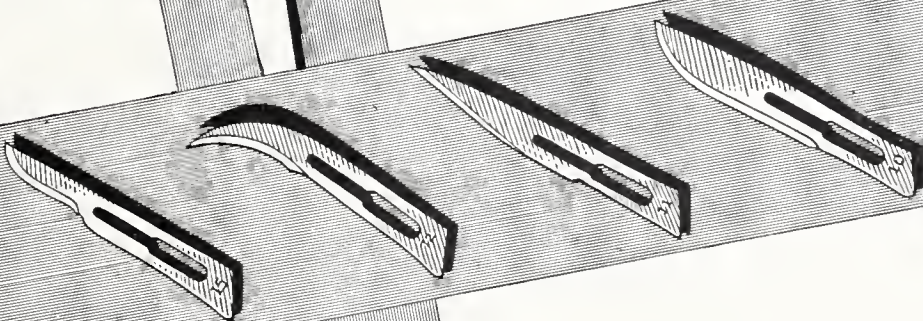
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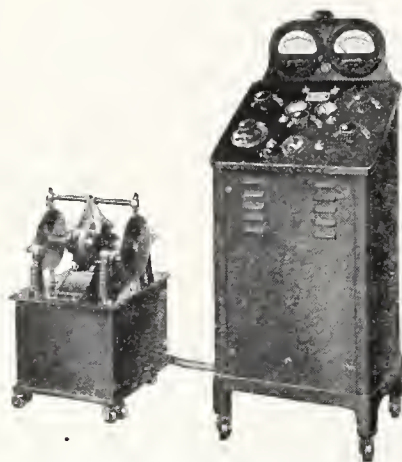
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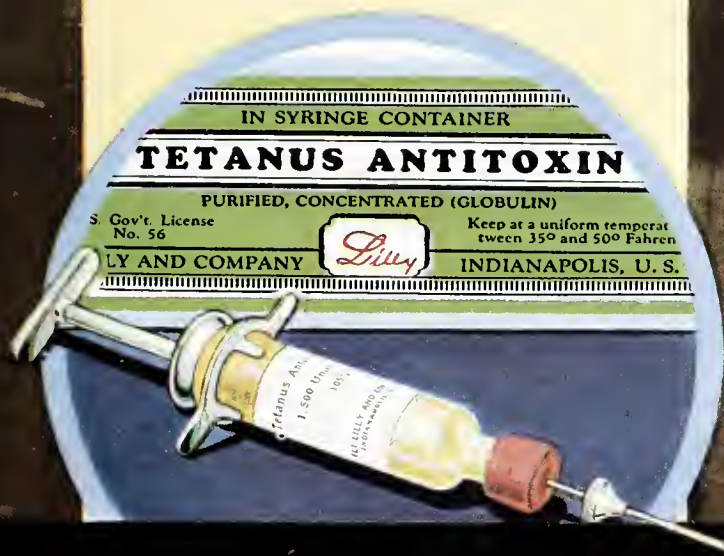
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### BOOK REVIEWS

(Continued from Page 14)

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This book should top the list on practical massage and therapeutic exercise.

H. L. L.

**Laboratory Methods of the United States Army.** By Charles F. Craig. Second edition. Philadelphia: Lea and Febiger. 1929.

It is a delightful small manual covering the subject in a most thorough and complete manner.

It is all that can be desired as a hasty reference manual. There are several new additions and new sections added in this edition.

H. R. O.

**Practical Local Anesthesia and Its Surgical Technic.**

By Robert Emmett Farr. Second edition. Philadelphia and New York: Lea and Febiger. 1929.

In writing this volume, the author has done much more than present clearly and concisely the subject of practical local anesthesia by adding many details indispensable in making up the cooperative team in the operating room. His style of writing is free and easy. At no time is he positive, yet by drawing all his conclusions from his own personal experience over a long period of time every statement he makes is convincing.

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(Continued on Page 23)



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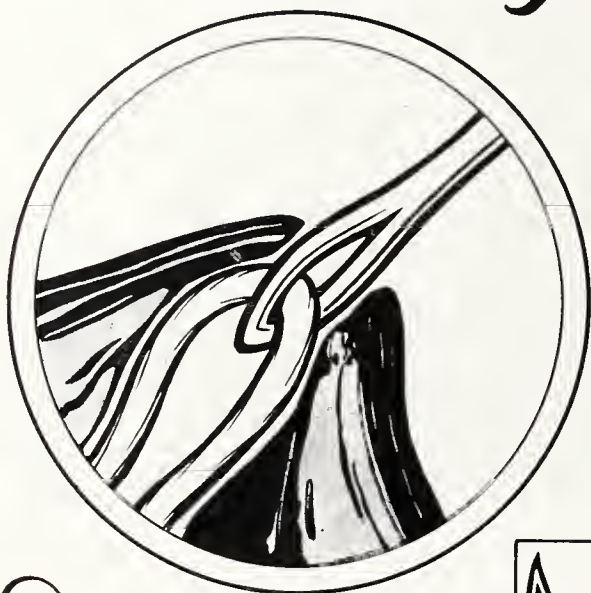
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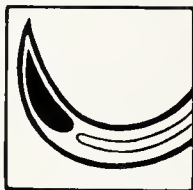
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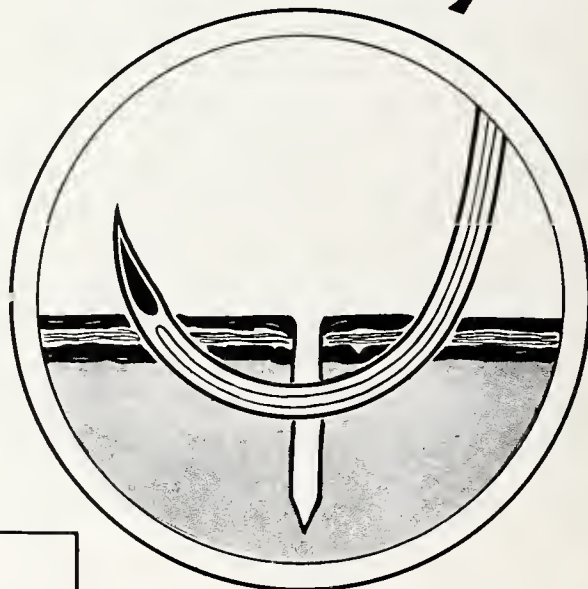


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## BOOK REVIEWS

(Continued from Page 19)

He calls attention to the fact that novocain immediately after it is injected into the tissues unites with the protoplasm and becomes inert, and for that reason is poisonous only when injected into the blood stream. I wonder how many surgeons using local anesthesia know that.

Another subject which is given considerable space is the importance or necessity of the psycho-anesthetist. That particular individual, in my opinion, is indispensable when working on highly nervous patients. In charity hospitals, the surgeon can as a rule act as his own psycho-anesthetist by injecting a little concentrated vocal profanity with the weak solution of novocain.

The most important requirement of an anesthetic, next to reducing pain to a minimum, is, as all surgeons know, relaxation. That subject is beautifully handled all through the paper and one is convinced beyond all doubt that relaxation can be obtained with local anesthesia just as well as with ether and certainly much better than with combined local and gas, when it is no longer possible to have the coöperation of the patient with the surgeon.

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No surgeon, whether intensely interested, slightly interested, or not interested at all in local anesthesia, can afford to be without this book on practical local anesthesia because of the many practical things it contains so indispensable in making up the chain of perfect surgical technic.

A. H. R.

**Hemorrhoids: The Injection Treatment and Pruritus Ani.**  
By Lawrence Goldbacher. Pp. 205. Illustrated.  
Philadelphia: F. A. Davis Company. 1930. Price \$3.50.

The essential point of the author's treatment is the large quantity of 5 per cent phenol oil solution used—up to 10 cubic centimeters per pile. On one occasion he injected 20 cubic centimeters, a dose containing 1 cubic centimeter of the pure drug.

The poisonous dose of carbolic varies, the minimum being rather more than 4 cubic centimeters (Shoemaker), although seven drops (Sajous) have caused alarming symptoms. If this is the case then the author is well within the margin of safety. He claims good results with no untoward after-effects.

(Continued on Page 26)

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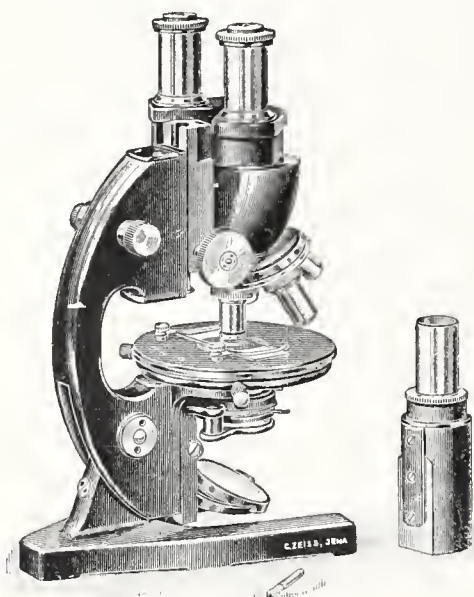
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### BOOK REVIEWS

(Continued from Page 23)

Pruritus ani is treated with the same solution, 10 cubic centimeters being injected under the skin one-half inch from the anus at the spot where the itching is most severe. Injections are repeated weekly. The author claims the treatments are painless and curative.

While Goldbacher may, and probably does, get the splendid results he claims for his method of massive injection of carbolic acid solution—10 cubic centimeters equals one-third ounce, it would behoove those who would imitate him to proceed cautiously lest they get the untoward results.

A. N.

**Gall-Bladder Disease, Roentgen Interpretation and Diagnosis.** By David S. Beilin. Saint Paul: Bruce Publishing Company. 1929. Price \$6.

This is a unique and rather attractively arranged book on roentgen diagnosis. In the preface, the author explains that he is writing a brief resumé of the embryology, anatomy, physiology and pathology of the gall-bladder, as well as a study of its x-ray features. These chapters are to be used in relation to x-ray work. However, it seems to me that they are too brief to be of much value; unfortunately some of the data are not up to date and therefore not quite correct.

The chapters on the technic of cholecystography are easily read, brief, and of value. The illustrations that accompany it are unusually good. The chapters on differential diagnosis are too brief to be of much help, although the x-ray plates illustrating these features are good. There are only sixty-five pages in the whole book; of course this is too small a number to give any complete resumé on the subject of differential interpretation of the gall-bladder disease, but it is a very readable book and of value because of its concise presentation.

S. H. M.

**Practical Materia Medica, an Introductory Text to the Study of Pharmacology and Therapeutics Designed for Students of Medicine.** By Clayton S. Smith and Helen L. Wikoff. Pp. 300. Philadelphia: Lea and Febiger. 1929.

This book is intended to serve as a medical text and laboratory guide in materia medica and pharmacology. The drugs are presented according to a chemical classification, discussing for each its composition, method of preparation, official preparation, and an extremely brief hint of its pharmacodynamic and therapeutic actions.

(Continued on Page 28)



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## BOOK REVIEWS

(Continued from Page 26)

Detailed chemical and analytical directions are included in great profusion. Sections on toxicology and prescription writing form concluding chapters. At intervals throughout the text questions are introduced to bring out salient points.

The authors state that this book is designed as a medical text, and in fairness to them it must therefore be judged strictly from that standpoint. Unfortunately, it fails to develop its subject in such a way as to give a medical student the type of knowledge he needs, or for which he has any use. Much space is devoted to compounds of little or no importance, while truly valuable ones are passed over in a word. A single instance may be cited to illustrate this misplaced emphasis and lack of applicability to medical needs. Thus, the three extremely important compounds, epinephrine, ephedrine and thyroxine are dismissed in a single page, and part, even, of that one page is taken up by their structural formulae. Contrast the knowledge needed by a medical student of these drugs with that required, for instance, of one given a whole page by itself, the preparation of soft soap and its liniment. Many such examples could be quoted if there were any point in multiplying illustrations. By using this text, a student might become well versed in pharmaceutical chemistry, but he would have little or no concept of the practical significance of the drugs, their mechanism of action, limitations, side-actions, toxicology, or of the many other factors which should be considered in their clinical employment.

The reviewer cannot help but feel that if this text represents a current concept of what a medical student should know of pharmacology and therapeutics, there is some reason for the irrational and empirical treatment of disease. On the other hand, if it is intended to cover only what might be termed chemical pharmacology, the greater part of the material is superfluous for medical students, in this age of adequate facilities for drug manufacture and distribution, and of crowded medical curricula.

M. L. T.

An Introduction to the Study of the Nervous System.  
By E. E. Hewer and G. M. Sandes. Pp. 104. Illustrated. St. Louis: C. V. Mosby Company. 1929. Price \$6.50.

This book, as its name implies, has been written primarily for students. It is divided into two parts.

Part I includes chapters on nerve cells and fibres, changes following nerve section, the ascending and descending tracts of the cord, cerebellar connections, the



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connections of the cranial nerves and basal ganglia, the microscopic structure of the cerebral and cerebellar cortices, the cerebrospinal fluid and the autonomic system.

Part II comprehends the normal physiology of the sensory and motor pathways and the results of interference with them at various points, with further chapters on the cerebral cortex, reflex action, levels of integration and mechanism of coördinated muscular movement, as well as notes on certain pathological conditions.

There is an appendix on histological methods, and a comprehensive index. Each chapter concludes with a list of references for further study. There are fifty-five diagrams, most of them in color, to illustrate the text. The subject matter has been boiled down as much as possible, hence a certain amount of dogmatism has been unavoidable.

However, for students interested in neurology, the volume is valuable for quick reference. The American edition contains an introduction by Sydney I. Schwab.

W. S.

**Diseases Transmitted from Animal to Man.** By Thomas G. Hull. Springfield: Charles C. Thomas. 1930.

A reading of this volume leads to the conclusion that the author says too much and not enough. He makes many sweeping, indefinite statements, so that the actual meat of his discourse could well be epitomized in concise paragraphs rather than extended over as many pages. On the other hand, the material is entirely inadequate for reference by the student and is totally insufficient to be of assistance to the worker who comes with a concrete problem. There is not enough accurate detail and, in general, descriptions are incomplete and often inexact. The book is loosely written and should either be condensed in a vade mecum or expanded into a real manual.

I seriously question the usefulness of this volume.  
A. C. R.

**Diseases of the Chest and the Principles of Physical Diagnosis.** By George William Norris and Henry R. M. Landis. With a chapter on The Transmission of Sounds Through the Chest by Charles M. Montgomery, and a chapter on The Electrocardiograph in Heart Disease by Edward B. Krumbhaar. Fourth edition. Pp. 954. Illustrated. Philadelphia and London: W. B. Saunders Company. 1929. Price \$10.

The fourth edition of Diseases of the Chest and Principles of Physical Diagnosis by Norris and Landis includes a chapter on transmission of sounds in the chest and one on electrocardiography in heart disease. The chapter on bronchoscopy by Dr. Clerf is clear and instructive. These additions are very important steps in making this book more useful.

(Continued on Next Page)



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## BOOK REVIEWS

(Continued from Preceding Page)

The authors have painstakingly pictured by clear descriptive words and a wealth of photographic material the essentials in understanding the proper methods of examining the organs in the thorax. Too often a short cut is desired in making diagnoses, particularly by numerous laboratory aids, but they have manifested the prime importance of using all of our powers of observation and considering the laboratory "our partner rather than our master."

It is needless to say that all the latest ideas have been incorporated in this excellent book. P. H. P.

**Essentials of Medical Electricity.** By Elkin P. Cumberbatch. Sixth edition. Pp. 443. Illustrated. St. Louis: The C. V. Mosby Company. 1929. Price \$4.25.

The first edition of this book was printed in 1905. This sixth edition is the first revision since 1921 and brings the subject up to date.

Doctor Cumberbatch is well qualified to write on the subject of electrical currents because of his long years of practical experience with them.

His chapter on "Physical Principles" is well worth careful perusal by those just entering the study of electrical means of treating the various body disabilities.

The chapter on "Electrical Currents Used in Medicine" will give one the necessary information for applying physical therapeutics, while the "Index of Electrical Treatments" gives one the details of application necessary to obtain results.


Doctor Cumberbatch's concise style makes the reading of dull subject matter refreshing.

It is a book that should be in the library of every physical therapist. T. H. P.

**Typhoid Regulations Amended.**—The regulations of the State Board of Public Health for the prevention and control of typhoid fever have been amended so as to include paratyphoid fever. Minor changes in the regulations have been made, with particular reference to milk supplies from premises where these typhoid or paratyphoid cases are present. Copies of the newly printed regulations have been sent to all health officers. Copies may be obtained by writing to the California Department of Public Health, Sacramento, California.

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### TRUTH ABOUT MEDICINES

#### New and Nonofficial Remedies

(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

In addition to the articles previously enumerated, the following have been accepted:

**Eli Lilly & Co.**—Merthiolate Jelly (Lilly); Merthiolate Ointment (Lilly).

**E. R. Squibb & Sons.**—Squibb's Dextrose-Vitavose.

**Frederick Stearns & Co.**—Synephrin; Synephrin Solution "A"; Ampoules Synephrin-Procaïn, 3 cubic centimeters; Hypodermic Tablets Synephrin-Procaïn.

The following article has been exempted and included with the list of exempted medicinal articles (New and Nonofficial Remedies, 1929, p. 481):

**G. D. Searle & Co.**—Stable Solution Dextrose and Sodium Chlorid (Searle).

**Butesin Picrate Eye Ointment.**—An ointment containing one per cent of butesin picrate (New and Nonofficial Remedies, 1929, p. 54), in a petrolatum base. Abbott Laboratories, North Chicago.

**Pneumococcus Antibody Solution, Types I, II, and III Combined—Mulford** (New and Nonofficial Remedies, 1929, p. 346).—This product is also marketed in packages of four 50 cubic centimeter double-ended vials with one complete intravenous outfit. H. K. Mulford Co., Philadelphia.

**Ampoules Dextrose (d-Glucose) 10 Grams, 20 Cubic Centimeters.**—Each ampoule contains dextrose (New and Nonofficial Remedies, 1929, p. 340), 10 grams, in distilled water, to make 20 cubic centimeters. Lakeside Laboratories, Inc., Milwaukee, Wisconsin.

**Ampoules Sodium Cacodylate 0.243 Gram (3¾ Grains), 5 Cubic Centimeters.**—Each ampoule contains sodium cacodylate (New and Nonofficial Reme-

(Continued on Page 35)



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1929-1930



# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXXII

MAY, 1930

No. 5

## PROBLEMS CONFRONTING THE MEDICAL PROFESSION

PRESIDENTIAL ADDRESS, CALIFORNIA MEDICAL  
ASSOCIATION, FIFTY-NINTH ANNUAL  
SESSION

By MORTON R. GIBBONS, M. D.  
San Francisco

LAST year, by way of introducing the subject which I expected to discuss in the following remarks, I recounted some of the problems which the old records show to have been the problems confronting the medical profession of California seventy-five years ago. My rudimentary forecast made at that time of the scope of my present subject shows that I displayed little conception of the problems which more thought has revealed.

Whereas the problems of the pioneers arose mainly from within, ours come mainly from without. Comparatively, medical practice then was a fixed matter—ours is in the midst of important changes, just as are all phases of social and business activity.

Our problems are mainly from without in the sense that the ways of the world today bear upon us so heavily that either we must present a firm front if we wish to preserve long-established medical custom, or succumb to pressure from various directions and alter our concepts of what is proper. What shall we do? What shall we change? Shall we make the first move? Shall we wait until the pressure can no longer be resisted and be overwhelmed? Or shall we study our problems, prepare ourselves and act when it seems expedient, and approach our destiny in a manner of our own selection by virtue of special knowledge and preparedness. I fancy the last is our *best* course.

I have selected two important topics which seem to me to deserve your thought. One is the influence which the physician wields in society, and the other is the tendency toward some form of state health care. These matters may not appear to be related, but I can see a very positive dependence of one upon the other.

### INFLUENCE OF THE PHYSICIAN IN SOCIETY

The esteem in which we are held as a group has everything to do with proper direction of the changes which many of us think are inevitable.

The medical profession is the largest educated group with a common interest. It is a highly

educated group. It has a very high proportion of good minds; yet, are we respected and do we carry weight in proportion to our mental equipment and attainments? I think not. If not, what are the reasons? I believe that it is because (1) we are not a business group; (2) we submit to exploitation; (3) we do not exhibit cohesion or concert of action; (4) we do not talk the same language as laymen; (5) our code of ethics disconcerts them.

(1) *We are not a business group*—that is, we are not businesslike. The income and aggregate wealth of physicians is not comparable to that of others outside of our profession bearing comparable responsibilities. Power and wealth are so nearly synonymous in this country that, not having wealth, we have no power. To the layman the money value of a physician counts as much as does that of another layman. The same attitude is true to marked extent even among ourselves. Yet we well know that a physician's income is not determined by his scientific value. What I am working up to here is a statement of my positive belief—that the California Medical Association does well to have a substantial (impressive would be better) reserve fund, if for no other purpose than for the world to contemplate.

(2) *We submit to exploitation*. Does it ever occur to you that it is illogical for the medical profession to take care of the sick poor for nothing? It is the habit of laymen to assert that we have our compensation in our experience. Not one-fifth of the work which a physician does for the poor is of any value to him, unless it is that it occupies his time, and diverts his mind from unhappy contemplation of his spare time.

The physician is not responsible for his fellow man's poverty. But society is. If society permits the poor man to exist, then society should share equally with the physician the burden of the poor man's sickness. I don't know what we can do about it. I don't know that we should do anything different if we could. Probably it is best to do as we do, and retain the consciousness of doing the decent thing.

Have you ever realized how we are exploited, and why? Most philanthropic work requires services of physicians prominently in its structure. The machinery is set up and the physician is more or less pleased to act as an essential part for

nothing or for a fee far smaller than that which other officials of equal importance would accept. Is he ever offered compensation commensurate with his importance in the humanitarian scheme? He is not. The philanthropist gets the glory because he gets the publicity. The physician gets none; he has no publicity. His satisfaction is found in the opportunity for service. But the public never understands that sort of thrill!

(3) *We do not exhibit cohesion or concert of action.* We do not organize strongly. Comparatively few individuals will put themselves out for the good of the group.

Any Rotary Club can get more done than any medical group and in a minute fraction of the time. The reason is Rotary is a unit. A member must pull his own weight, must work and must attend meetings, or else get out and make room for someone who will. Rotary publicity is faultless. Whatever individuals may be or do, Rotary principles receive the publicity, and the principles are easily understood and above reproach. Did you ever hear of an individual Rotarian making comment or expressing opinions on Rotary business for public consumption? No.

Unhappily, the medical man dearly loves to express minute variations in nonessentials. It is not undignified to say the same thing in the same way as one's confrères or to find out from one's associates what others are doing and thinking, but it is not necessary to engage in quarrels over minor differences of opinion. The newspapers and the public love an internal scrap, but our prestige falls every time it happens.

Why is it that when a man gets in the limelight he is so prone to make statements at variance with the best interests and expressed policies of his confrères? He knows that the newspapers will use his words as they see fit. Sadly enough, he is often willing to talk without knowledge of his subject. He seems to feel that he acquires virtue by his puny exhibition of independence. He makes himself—and the rest of us—ridiculous. The public is delighted when newspapers provoke acrimonious discussions.

(4) *We do not speak the same language as the layman.* The medical specialty is farther removed from the bulk of human activities than are all others, than possibly the clergy. We literally speak a different language. Everyone likes to exercise any thoughts he takes interest in as well as anything in which he has developed facility. It is natural, but thoughtless, for physicians to talk shop among laymen. Medical affairs always imply trouble or disaster to a layman. To a physician the scientific considerations are interesting and technically pleasing.

These attitudes cannot be reconciled. One way to be less misunderstood by the public is to discuss medical subjects with them and make them understand, and not discuss cases with other physicians in the presence of laymen in a manner

they cannot understand. Some doctors exhibit shocking bad taste, as well as commit tactical blunders along these lines. We are not understood, but that is no reason why we should actively cause misunderstanding.

Did it ever occur to you that we are suspected of some unfathomed but very clever trick because we do not patent our discoveries, and because we go about apparently trying to forestall perfectly good business by practicing preventive medicine?

It has become the common trait of the American, as the ratio of the knowledge in his possession to the whole store of knowledge diminishes, to exercise his vanity, or save his face, by assuming a cheap cynicism and disbelief. This is directed most toward medical matters. Gullibility remains the same. Hence the conservative claims of the scientist are discarded in favor of the ballyhoo of the charlatan.

But ignorance and misunderstanding are not always spontaneous. There is a calculating kind of hostility and antagonism. There is active mobilization of ignorance and prejudice by agencies actively hostile to medical science.

(5) *Our code of ethics disconcerts the layman.* Our code of ethics is commonly thought to be a provision for our own advantage; whereas it is designed primarily for the protection of all society.

Our ethics and customs are time-honored; and the mechanism has been well worked in and is reliable.

Such prosperity as that of certain of our notorious licentiates is attractive. If one is endowed with the Barnum characteristics, and is not trammelled by ethical considerations, he may prosper to a much greater degree than he who retains the respect of his confrères. Plenty among us have the requisite daring but not the lack of standards.

The fact is we know intuitively, even if we have not reasoned it out, that our present standards of interrelation within the profession are the best for the public and the best for ourselves. Individuals and little groups depart from our standard, attracted away for short adventures, but few fail to gravitate back to the substantial mass. They would be grieved and shocked if they could not have communion with the parent group and find sanctuary in its laws, no matter what they may do to others. They are like the traffic violators who take liberties with the rights of others, but complain most bitterly when their own rights are infringed.

The successful man, high in his profession, who through a subconscious feeling that the laws do not apply to him because of his power or position, would be scandalized if he could not have the protection which he should give to his less fortunate brethren.

The mark of the strong man everywhere is punctilious observance of the rights of others.



It lies in a sense of fair play; and it is exactly that which our ethics mean.

We do not need to depart from, nor ever alter our standards. If we do adhere to the old standards, what then. I am no idealist in the sense that I believe the profession to be chemically pure. I have ample evidence that there is a proportion of the profession, but not nearly so large as in other callings, whose excellence of behavior is in direct ratio to the proximity of the police, so to speak. In that we are just the same as our lay fellow citizens. However, the high-minded and high-principled majority will always remain the same, and there can be no failure of our standards by a process of attrition. No change is necessary in our standards.

Can anyone doubt that the ethics of business and government and all human relations have become higher within our own time? We may be beset, but we will be strong if we will present the unbroken front of our common understanding and our ethical cohesion. We must play our own game with our own rules—not try to play the other fellow's game.

#### TENDENCY TOWARD STATE HEALTH CARE

And now I come to the most important economic subject before the medical profession today—state health insurance.

All about us are evidences of forces working in that direction: (1) The various federal provisions for wholesale health care, the Army, Navy, Public Health Service, Veterans' Bureau, and all that these embrace. (2) The state and city health machinery. (3) County hospitals providing medical care at wholesale rates. (4) Employers' hospitals and health service. (5) Workmen's compensation for industrial injuries. (6) Private health insurance and hospital associations. (7) And most of all, the attention focused on the high cost of medical care by the activities of the national committee.

It will be easy for the people to accept the idea of state health insurance. Insurance is understood and is gaining more adherents every day, due to the supposed efficiency and economy of large organizations. Hence, it will be easy to reason that the independent doctor is inefficient, whereas the medical machine would be efficient. Such reasoning, we know, is not true without important qualifications, but we must be prepared to convince many people.

If we exhibit prejudice, we can have little influence in shaping legislation.

Chester Rowell, a friend of our profession and a man who has more intimate knowledge of our problems than any other layman of whom I know, would have some European system of health insurance adopted in California. He said what is good enough for Europe is good enough for us.

I cannot believe that he had in mind the inhuman treatment, the long dreary queues, the obliteration of the individual which the European methods entail. No American public would submit to such treatment.

I believe Mr. Rowell spoke of an idealized system of health insurance when he spoke as he did at the Commonwealth Club. And he does not want, I am sure, the manner of treatment of European patients, with its herding and bullying. Nor does he want the application of the methods of our own workmen's compensation law to health insurance. It is customary to consider the California Workmen's Compensation Law to be practically perfect. It is a remarkably effective law and is administered in an enlightened manner. However, in its insurance phase, where the patient-doctor relation comes in, it permits the interposition between the patient and the doctor of a layman, ordinarily without sympathy or knowledge or appreciation of the delicate balance necessary for the best results.

The production of the traumatic neurosis cases is chargeable in a large measure to this arrangement. There is no means of knowing to what degree this is a fact. My estimate is that one-half of all such cases are precipitated or aggravated by unsympathetic or harsh or misguided handling by laymen. These conditions should be prevented.

Another objection to lay intervention is that laymen have shown a knack for selection of doctors who are insurance-minded, or are at least pliable. The doctors reflect the insurance company's attitude toward the injured. The fine example of some insurance companies which have enlightened medical supervision shows what is possible.

As I said above, the Workmen's Compensation Law is a splendid law and I gladly pay tribute to it. It is brought into the discussion to emphasize the fact that a state health insurance law must possess all necessary good features and, besides, qualities which will prevent the possibility of entrance of bad features.

We must become experts and we must be able to prove to the people of California that what we advocate is the best.

Bear in mind that the first attempt at a state health law will probably be made by enthusiasts. The chances are that the desire to pass the law will be far stronger than the desire that it be right.

I have avoided reference to other subjects in an effort to focus attention on the important subject which is here considered.

In times of stress the medical profession has gotten together, but generally it was too late. Let us make it not too late this time.

Let us make of ourselves the best-informed group on health insurance in California.

Let us prepare our minds to join quickly in furtherance of a sound plan when it is presented.

Let us stand ready to throw our weight and resources of knowledge behind that plan.

Let us be ready to mobilize with alacrity.

Above all, let us select leaders whom we can trust—and then trust them.

350 Post Street.

## SUPERIOR MESENTERIC THROMBOSIS

### REPORT OF CASES

By WILBURN SMITH, M. D.

Los Angeles

DISCUSSION by John Homer Woolsey, M. D., San Francisco; Thomas O. Burger, M. D., San Diego.

**S**UPERIOR mesenteric thrombosis was practically unknown until that brilliant German pathologist, Virchow, discovered and described a postmortem case of a superior mesenteric artery enlarged, and so completely closed with a thrombus that it appeared as a fibrous cord. The patient, a woman, had succumbed to some other disease, and he wrote in detail of the case in 1847. The clinical side is not reported, for the condition had existed for some time, and nature had established a collateral circulation. This type of case usually passes unrecognized and is often entirely overlooked, being diagnosed as one of colic, or some partial intestinal obstruction. The patient may recover and succumb to some other disease. A postmortem may never be made, and should one be made the examiner may not be thorough enough to examine all the tissues, as did the brilliant Virchow, and so the condition never be discovered.

This condition is not common, for since the first careful description in 1847 about five hundred cases have been described, with only thirty-five of these surviving the attack whether operated or not. This gives the appalling mortality of 93 per cent. The artery is involved about five times as often as the vein, and the superior mesenteric is involved about forty times more often than the inferior. It is true the amount of intestine supplied by the superior is much greater, as it extends from the duodenum to the anastomosis with the inferior at the middle colic. Also Litten maintains that the superior is a type of end-artery and has more of a tendency to favor an infarct, while the inferior tends to establish a collateral circulation. One would suppose in an artery which forms arcades that collateral circulation would easily and most frequently obtain. Even though Virchow,<sup>1</sup> Karcher,<sup>2</sup> Chiene,<sup>3</sup> and others have discovered cases in the postmortem room that had died of other more marked pathology, yet collateral formation is the exception in this artery. Karcher's case was in a woman, forty-one years of age, who had cardiac decompensation symptoms with abdominal pain. She developed femoral thrombosis, and in six weeks

was operated upon for gangrene of the leg. She died a week later and on postmortem showed, in addition to disease of the mitral, tricuspid and aortic valves, lateral thrombi in both auricles, infarcts in lungs, spleen and kidney, an obliterating thrombus in the profunda femoris and, what is more interesting, a thrombus obliterating completely the superior mesenteric artery for a distance of thirty-seven millimeters. This thrombus was firmly adherent to the walls of the artery, but in spite of the same there was only slight reddening of the mucous membrane of the ileum. Chiene's case showed an aneurysm in a woman sixty-five years of age with the celiac axis, superior and inferior, involved; and the latter vessels were completely obliterated, forming fibrous cords.

The causes of this rather rare condition may be better studied if we separate the pathology of the artery from that of the vein. Under the artery we think first of embolus which is often followed by thrombus, or of thrombus alone. The embolus comes from heart valves and vegetations, from atheromatous plaques, and from the breaking up of a thrombus in the auricles or ventricles. The thrombus arises from diseased arteries, from aneurysm with extension of the clot, and from pressure on an artery due to an aneurysm or a tumor. In venous involvement various causes which may injure the veins, or infect them, or a combination of the two, are the factors. The more frequent causes are crushing and ligating of the appendicular veins, pelvic surgery where adhesions are present, splenectomy, volvulus, intussusception, strangulated hernia or extension from the splenic or portal veins. Clinically arterial and venous thrombi differ in that the arterial thrombus disposes to be sudden in onset, while the venous tends to be gradual.

### EXPERIMENTAL WORK

Much experimental work has been done to ascertain the exact pathology and account for the variety of clinical symptoms manifest in these cases. Sprengel's theory that obliteration of an artery gave an anemic infarct, while the same in a vein gave an hemorrhagic one, does not here obtain; for, regardless of the cause, the infarct disposes to be hemorrhagic. This hemorrhagic infarct is usually followed by peritonitis, the mucous membrane ulcerates and breaks down with hemorrhage into the canal. The mesentery becomes edematous and the intestine may perforate and cause the peritonitis from macroscopic lesions. Extensive gangrene may develop in forty-eight hours and there may or may not be a distinct line of demarcation.

Following Litten's suggestion that the arteries are terminal, various experiments, namely, ligation of the artery or vein; making of artificial emboli by oil which is not typical and so not parallel; cutting portions of the mesentery along the intestinal attachment to study the effect on



the mucous membrane, have been done upon the lower animals, but whether the conclusions are safe to accept for the human is a question.

The result of the experiment of ligating the artery was anemia followed by violent tetanic contractions of the small intestine, followed in two or three hours by relaxation and a congestion which terminated in a hemorrhagic infarct. Beckman and Ravenna showed, in operations on rabbits, dogs, and cats, that no effect was produced and that collateral circulation was established. On injection of paraffin, a large infarct was produced the center of which tended to be anemic and the periphery hemorrhagic. Tying the mesentery along the border of the intestine in three-centimeter lengths produced first the change in the mucous membrane of areas of necrosis, while five-centimeter lengths produced necrosis in greater extent, first of the mucous membrane and later of the wall itself.

The deductions from the various experiments are as follows: Lodgment of embolus may not produce infarct and a collateral circulation may be established; slow closure by a thrombus may stimulate collateral circulation; many cases of closure of the artery may be overlooked, due to the collateral anastomosis, and the closed artery may escape detection at autopsy, since the cause of death is foreign to this pathology.

Welch and Mall ligated the collateral circulation of the small intestine at the pancreaticoduodenal and at the middle colic and nothing happened, as the superior mesenteric was still intact. They then compressed this artery and when it reached one-fifth of normal they began to get an infarction. This led them to believe it was a matter of pressure in the artery, whether due to pressure constricting the vessel or cardiac; namely, *vis a fronte*.

#### CASES FROM LITERATURE WHICH CORROBORATE THESE DEDUCTIONS

*Karcher's* case seems to corroborate the latter. A woman, forty-one years of age, with cardiac failure and collapse, was brought into the hospital. There was violent abdominal pain and frequent bloody stools, with distention of the abdomen and tenderness. The left leg was very painful along the femoral and later had to be amputated, due to gangrene. Heart decompensation continued and death followed a week after the amputation. The autopsy showed multiple lesions in the heart with infarcts in lungs, spleen and kidneys, and thrombosis of the femoral vein with obliteration of the superior mesenteric. Abdominal pain was due to lodgment of the embolus with injury to the intestinal mucosa, as evidenced by the bloody stools, but collateral circulation was fairly established. Many cases have cardiac lesions that have so lessened *vis a fronte* and decreased circulation, that venous stasis limits the blood passing through the part and lessens the ability to form collateral channels.

*Councilman's*<sup>4</sup> case was incomplete obliteration with fecal vomiting and obstipation and death from intestinal obstruction. Here the pathologist reported atheroma, blocking incompletely the superior mesenteric artery with no changes in the intestines. So the circulation may be partially disarranged with intestinal obstruction and the intestine still remain normal. Thus it requires more blood to keep the peristaltic function intact than it does to keep the life of the tissues. This conclusion is supported by intermittent claudication where the function is disturbed before the life of the tissues.

*Reich's*<sup>5</sup> case gave all the symptoms of intestinal obstruction; was operated for the same and, after careful exploration, nothing was found. The symptoms persisted and a colostomy and ileostomy was later done for the same, but the patient died. The autopsy findings showed arteriosclerosis of the aorta, partial thrombosis of the superior mesenteric, and an infarct involving the jejunum to the extent of eighty centimeters. No doubt the thrombus existed and produced the ileus of this loop with the clinical symptoms, though the condition was not apparent at the time of operation.

In the above cases we see three very distinct classes of cases: (1) *Karcher's*, with other pathology overshadowing the thrombus and with the collateral circulation becoming established. (2) *Reich's*, the opposite extreme, with marked infarction and destruction of the mucosa. (3) *Councilman's*, intermediate, with intestinal obstruction the overshadowing symptom, and no marked pathology in tissues. The amount of pathology will depend on the cardiac compensation and the *vis a fronte*.

#### VALUE OF HISTORY

A careful history is of value in about two-thirds of the cases, and will show some suggestion of an etiology, namely, valvular disease, arteriosclerosis or aneurysm, with exciting causes of abdominal surgery on stomach, appendix, or hernia. There may be exertion, but pregnancy is also a factor. In the balance of the cases the history has no bearing. Cases in men are twice as frequent as in women, and occur between twenty and sixty years of age.

#### SYMPTOMS

Pain is constant in type and paroxysmal, wave-like, merging into the continuous pain of peritonitis. The intermittent type of pain may be ascribed to the anemia which for the first few hours is tetanic in type. As it becomes intermittent it simulates the pain of intermittent claudication. There may be some association with peristalsis disturbed by the obstruction.

Vomiting is frequently present, at first reflex, then obstructive, and later due to the ileus of peritonitis. This is of the stomach contents and in the severe pathology, of the intestinal contents, which will be eventually bloody.

Constipation or obstipation is present in two types of cases, namely, those with the severe destruction of the mucosa and those where peristalsis is paralyzed without destruction of mucosa. There may be slight amount of flatus with enema, but if the involvement is marked none will pass. Blood is present in the more severe form and will be present in about 41 per cent. Early diarrhea may precede the constipation. The constipation may at first be due to the paresis, or in turn to the gangrene, and later be followed by that due to the peritonitis.

The temperature may at first be subnormal but rise later, due to the peritonitis. The abdomen is tender throughout, but may be accentuated in a certain area. Gradual distention appears which is usually tympanitic, but may be flat in the sides later, due to fluid.

Palpation may reveal a local mass due to the edema in the mesentery, and if palpated, with the other symptoms and findings, helps one to make a diagnosis. On auscultation one finds a gradually decreasing amount due to the paresis, and the onset of the peritonitis.

A leukocytosis is usually present, approximately 20,000, with a differential of above 85 per cent polymorphonuclear leukocytes.

The symptoms referable to the pathology: (1) In very severe destruction the main symptoms are diarrhea with bloody stools and hematemesis, associated with collapse. (2) In less severe, all the symptoms and landmarks are of obstruction. (3) Combinations of the above, namely, bloody stools and hematemesis, with obstruction symptoms, may occur. (4) In cases with a meager pathology but with symptoms overshadowed by greater pathology the patient may form collateral circulation. (5) With very mild pathology, the symptoms are akin to ulcer, namely, pain following eating, which is relieved by vomiting. The pain is explained by the food stimulation of peristalsis, and this pain is like the intermittent claudication due to the anemia, and a partial ileus exists. This is followed by vomiting and relief. With this may be associated cardiac disease and hence low pressure in the superior mesenteric artery. This is also seen in splanchnic sclerosis where there is a decrease in the blood supply.

Gerhardt<sup>6</sup> says a typical case should present the following: A definite cause for an embolus, intestinal hemorrhage, paroxysmal pains, ileus, fluid in the abdomen, subnormal temperature with a palpable abdominal mass. If there is no vomiting of blood or diarrhea with bloody stools, then superior mesenteric thrombosis will resemble Councilman's case and be diagnosed intestinal obstruction.

#### DIFFERENTIAL DIAGNOSIS

The differential diagnosis from the following are to be thought of: acute perforative appendicitis, volvulus, intussusception, and intestinal obstruction. The more severe cases of thrombosis

with the manifestation of bloody stools and vomiting are not confused with the appendix. In the latter the pain is about the umbilicus, with initial vomiting and then temperature; in the former the pain passes to the right iliac fossa; there is no obstipation and a return of the vomiting is much later.

Volvulus occurs in older people with no specific etiology of thrombus, no bloody stools, but obstipation and distention and vomiting tend to place it as an intestinal obstruction. This in turn may be the points in the middle class of the thrombus where all symptoms, as in Councilman's, are obstruction.

Intussusception is more nearly like the severe type of thrombus. Here we see more often a child with sudden attack of obstruction with vomiting (not bloody), with bloody stools and often the sausage-shaped tumor, palpable per abdomen or (the head) per rectum. If there be no diarrhea of blood, and hematemesis, the cases are diagnosed as intestinal obstruction.

#### PROGNOSIS

The prognosis depends on the extent of the thrombosis and the early recognition and treatment. The progress is rapidly downward, with rising temperature, collapse and peritonitis. Sixty per cent die in the first week and the mortality approximates 95 per cent. Five hundred cases are reported in the literature and only thirty-five survived.

#### TREATMENT

Treatment may be classified according to the degree of the pathology.

In the very mild, the symptoms are ulcer with the pains as recited above, which are due to the peristalsis being excited by the food intake, and due to the anemia of the part, there is spasm. Here diets easily digested, with medication to assist digestion. The pathology is a partial closure or a very decreased blood supply due to splanchnic sclerosis.

In the more severe, with overwhelming other pathology, the abdominal symptoms are not of sufficient severity to warrant a laparotomy with the other cardiac, or cardiovascular symptoms, and here eventually, under symptomatic treatment, the collateral circulation is reestablished.

In the very severe types where infarct forms, operation is the only method of choice.

#### REPORT OF CASES

CASE 1.—At this point I wish briefly to describe two cases. The first was during my intern days, and was so unique that it was not easy to forget. A woman, approximately twenty-eight years of age, came into the hospital with only the symptoms of a chronic appendix. She was of the upper strata of society and could have everything she desired. My chief, one of the best surgeons I have ever known, operated and removed a small chronic appendix and there was no other pathology. The following days were tragic. Consultations were frequent. The patient began to vomit slightly, the abdomen to distend, and the bowels became more and more constipated. The tem-



perature rose gradually, and the abdomen became more silent until all the symptoms were of a peritonitis. The father was a prominent citizen and every means to quiet the vomiting was exhausted. Consultants had only suggestions of no avail; the eventual came. The postmortem revealed a thrombus in the ilocolic vein and a portion of the ileum was gangrenous with a diffuse peritonitis. I can see the patient, a reasonably healthy young woman, restless, vomiting, distended abdomen, nothing relieving the same and the anxiety of the relatives. It certainly impressed me that a chronic appendix is not to be despised nor a suppurating appendix to be despaired.

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CASE 2.—The next case, a nurse, thirty-two years of age, single, was admitted to the hospital complaining of pain in the right side. She had a negative urine, blood, and Wassermann. At this time, September 21, 1927, I removed her appendix and did a subtotal hysterectomy for a multinodular fibroid uterus. She was brought into the hospital almost four months later with a very acute abdomen, which had its onset about fifteen minutes after she had eaten a ham and lettuce sandwich. Her temperature was 97 degrees upon admittance, pulse of 64, and respiration of 20. On the 19th of January, the day following the admission, I saw her for the first time. She was now transferred to the surgical service. She gave a history of nausea and vomiting, severe paroxysmal attacks of pain, though it was more or less continuous.

The pains on admission were much more severe and the patient rolled in agony at the time. The admitting physician could not account for the severity of the pain, and being in a woman he feared it might be exaggerated. Since I had removed the uterus and appendix only four months prior, and there was no history of ulcer, I was firmly convinced there was a relation to the food, even though friends had partaken of the same kind of sandwich at the same time. Enemas were followed by a great discharge of blood, and the results of the enemas were not satisfactory as far as flatus and feces. The tenesmus and also the vomiting continued. The patient assumed a dorsal or lateral position, with the knees flexed, and the hands on the abdomen, in great pain. She had received an opiate under the medical care, so was not in the severe pain of the day previous. Her face was anxious and she looked haggard and tired. The heart was negative for valvular pathology; blood pressure of 138-70. The abdomen was distended and tympanitic, with a suggestion of flatness in each flank. Definite rigidity existed of the lower abdomen, possibly more pronounced on the left rectus. My impression was gastro-enteritis from the sandwich. A urine and blood examination was suggested, and this was later phoned to me as follows: 20,400 leukocytes, with 85 per cent polymorphonuclears. Urine 1.026, with one per cent indican. The urine showed the dehydration with a suggestion in the indican of small intestine trouble. The temperature was 99.2, pulse 76, respiration 20 in the morning, but in the evening it was 99.6, 84, and 22.

On January 20 the abdomen showed more tympany with less peristalsis, and only in the upper abdomen was there audible peristalsis. The lower abdomen was more tender and more rigid. A pelvic examination showed the cervix mobile and no evident tenderness in the cul-de-sac or the adnexal regions. The evidence was not conclusive, as the abdomen was too tender and rigid to allow abdominal palpation. A repetition of the enema gave blood and practically no flatus. A repetition of the blood count gave 20,450, with 86 per cent polymorphonuclears. A special urine was examined for indican and showed 1.030 specific gravity with a three plus indican. Temperature, pulse, and respiration in the morning were 99-100-16, and

later in the day the temperature, pulse, and respiration were 99.6-100-18.

Because of the severe pain, followed by vomiting, which was marked at first but less the second day with continuing nausea; the unsatisfactory results with enemas and the presence of blood; the white blood count persisting and, if anything, a little increasing; and the marked increase in the indican, I made a tentative diagnosis of incomplete obstruction of the small intestine probably associated with the appendix operation. My reasons for the diagnosis were that appendicitis, salpingitis, and ectopic pregnancy were eliminated by the first operation. The paroxysmal severe pain associated with peristalsis, and the presence of indican in excess, suggested small intestinal obstruction while the passage of the blood and slight flatus made me modify to incomplete obstruction.

Upon the above diagnosis I made a right rectus incision and removed the old scar, believing the trouble would be due to adhesions from the previous operation. On reaching the peritoneum it was dark, like that seen in a recent ectopic rupture, and on entering the abdomen free blood was present. It could not be ectopic, and I had never seen an ulcer give free blood and there were no food particles. I made a culture of the blood, which had a slight odor. On examining into the left pelvis I found a few recent adhesions trying to wall off a loop of ileum about fifteen inches long, absolutely black, and the endothelium losing its sheen and gloss. There was no evidence of bands nor volvulus, but the mesentery was thick and edematous and this blackness faded into the edema of the normal intestine. The vessels were thrombosed and the extent of the pathology was uncertain. The loop was withdrawn and excised and the ends of the ileum sutured into the lower angle of the wound. Plenty of drainage was inserted, a wide sheet of rubber tissue placed to wall off the upper from the lower abdomen, and the wound closed. A tube was inserted into the proximal and the distal loops of the bowel.

The patient made an uneventful recovery with an ileostomy wound. We used the distal end to give Murphy drip and thus save the patient from nausea incident to the need for excess fluids. In about four weeks I again operated and did an end-to-end anastomosis. The patient had a good recovery and left the hospital March 14 with only slight soiling of the dressings due to a very small fistula, which later healed.

#### CHOICE IN METHOD OF SURGICAL TREATMENT

One can never estimate the extent of the damage. It may have reached its limit or it may extend farther after the operation. There are two methods of handling the case. Moynihan suggests the excision I did in this case, and makes the enterostomy openings to use for fluids and food, etc.; others treat the loop as in a Mikulicz operation, and later excise the loop and have the gun-barrel effect, and then anastomose. It is usually inadvisable to anastomose at the time because the patient is in great shock and the added time is an item. Also the edema of the apparently normal bowel is great and makes the operation difficult.

#### CONCLUSIONS

Occlusion of the mesenteric artery is usually from an embolus followed by thrombosis. In the mesenteric vein it is thrombosis from the start.

The lesions produced are variable, from slight



congestion to marked ulceration and extensive gangrene.

1. The occlusion may be followed by collateral circulation either of a temporary or permanent nature.

2. The occlusion may be followed by cessation of function yet the vitality of the intestine be intact.

3. It may be an infarct with death of a variable amount of the small intestine.

If we have occlusion of a branch and get collateral circulation, we may have slight abdominal pain and distention and these be overshadowed with a greater pathology and the patient survive.

In number two, where the occlusion is in part only, and the function disturbed without the life of the tissues, the symptoms may be those of ulcer or intermittent claudication. These patients in the more severe type have pain incident to food and the tetanic pains like the spasm incident to the anemia. Symptoms of obstruction supervene and the patient may be operated and no obstruction discovered.

In the most severe type, number three, there is definite evidence of obstruction with hemorrhage from the bowels and vomiting, often with blood. These gradually fuse with the clinical findings of peritonitis.

This condition should be regarded as requiring surgery though a few milder cases have had a favorable outcome without surgery.

1401 South Hope Street.

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#### DISCUSSION

JOHN HOMER WOOLSEY, M. D. (490 Post Street, San Francisco).—This subject may seem to some as too rare in occurrence to merit the attention and space devoted by the author but, let me emphasize, erroneously so.

I am impressed with three aspects of superior mesenteric thrombosis, all emphasized by Doctor Smith: (1) In making a diagnosis the importance of the history, both antecedent and present; (2) the varying degree of injury and, therefore, variability of symptoms; and (3) the importance of early surgical exploration in this as in any acute, critical and undetermined intra-abdominal complaint.

The antecedent history of an endocarditis, or of any infection with which there might be accompanying emboli; the history of an abdominal injury or the existence of arteriosclerosis are provocative causes subsequent to which arterial mesenteric thrombosis most often occurs. This history of an enteric inflammatory lesion is the one common antecedent of a venous mesenteric thrombosis.

The result of an obliteration of a portion of the arterial supply or the venous return is dependent upon the degree of involvement. Therefore the symptoms and signs will vary as to whether there is only a limited necrosis of mucosa or an extensive infraction of the entire intestinal wall. Undoubtedly people live after a mild degree of mesenteric thrombosis, as they do after acute pancreatitis of a limited degree and in such instances without surgery and, therefore, without a direct view, the diagnosis often remains in doubt.

Surgery today has reached the stage where an intra-abdominal exploration can be done with little to no shock. Early recourse to a direct view of a serious and undetermined intra-abdominal disturbance should be the rule. Mesenteric thrombosis of such a degree as to cause death of a portion of bowel, giving, therefore, symptoms of severe intra-abdominal pain, shock and, as a rule, a marked leukocytosis and later a distended motor function of the intestines, vomiting, and bloody stools, should have prompt intra-abdominal exploration, regardless of whether the diagnosis is, or is not, made. The primary diagnosis in such an instance is "a surgical abdomen" and early diagnosis gives far better returns than malefic procrastination.



THOMAS O. BURGER, M. D. (1301 Medico-Dental Building, San Diego).—Doctor Smith has added a valuable contribution to the medical literature in this complete discourse on the subject. It is rare, though often enough, to have our attention called to the possibility of such a condition when a diagnosis is not fairly definite.

After taking into consideration the past history, age, and the possibility of emboli, I have made a preoperative diagnosis of occlusion of the vessels in the case of two patients. One of these in mind was inoperable, as proved at autopsy. The second one was opened with the hope that the operative procedure might relieve the condition, but the findings were such that it was hopelessly impossible. In both of these cases there was occlusion of the arterial circulation.

The differentiation between arterial and venous block, I think, is clinically quite difficult, and probably of very little difference insofar as results are concerned.

While thinking of occlusion of the mesentery vessels, we must also think of and consider the possibility of a coronary occlusion in these same types of people. Both these conditions coming from—in the majority of instances—the same source, it is very difficult and almost impossible at times to differentiate from some of the more common catastrophes of the upper abdomen. They are both attended with terrific pain, shock, vomiting, rigidity, and with a leukocytosis in a very short time, also a rise in temperature due to the autolysis of the tissues similar to that of an infection.



It behooves the surgeon to be on the lookout for these conditions from a diagnostic standpoint in order to avoid operating unnecessarily.

✽

DOCTOR SMITH (Closing).—I appreciate very much the discussion by Dr. John Homer Woolsey in which he emphasizes the etiology of the condition and the importance of early abdominal exploration.

Also the discussion by Dr. Thomas O. Burger in which he also emphasizes the etiology and makes the point that differential diagnosis between arterial and venous block is impossible clinically. To this I fully agree because the treatment is essentially the same.

I only wish to reemphasize the importance of the careful history, physical examination, and laboratory work. It is quite true that the history, particularly as to cardiovascular disease, is very important, the suddenness of the onset and the acuteness of the pain also are very marked. The urinalysis should always be taken into consideration, because the indican is usually very high due to stasis produced by the paresis of the small intestines. The bloody stools will give a suggestion, and must not be confused with intussusception or enteritis.

I also wish to emphasize that we must limit operation on these patients. They are in extreme shock, ileus is marked, and an anastomosis should not be attempted. It is preferable to do as little as possible, and either to bring the gangrenous loop out of the abdominal wound and fix it there so that at a later date it can be excised and the usual operations for closure performed; or else bring out the loop, suture it into the wound and excise it immediately, leaving two openings, one to relieve the obstruction and the other through which saline may be administered if desired to relieve the toxemia.

## TREATMENT OF CANCER—PRESENT DAY RATIONALE\*

By ROBERT C. COFFEY, M. D.  
Portland, Oregon

NOTWITHSTANDING the fact that practically every general medical meeting of importance has one or more papers or addresses on cancer and every public health meeting of importance has a discussion of the subject, and every medical institution of research does work on cancer, there has been no notable contribution to our knowledge as to the nature of cancer within a generation. If we would devote our time to systematizing and inculcating our present knowledge of cancer into the minds of the medical profession and the laity instead of following every new theory, we could easily save twice as many cancer patients as we are now saving. Attempts to promulgate new theories as to the nature, cause, and treatment of cancer, and the publication of half-baked theories with no foundation of fact for the reading of the general public so muddles the lay mind that all our attempts to establish the cancer question on a sound scientific basis for the benefit of humanity are largely nullified. So that today the layman is probably no better prepared to decide matters pertaining to cancer than he was twenty-five years ago.

\* Read before the general meeting of the California State Medical Association at the fifty-eighth annual session, Coronado, May 6-9, 1929.

## PARASITIC THEORY OF CANCER CAUSATION

The parasitic theory is the most harmful of all because it paves the way for the groundless hope of both a preventive and curative serum. The parasitic theory of cancer is not new. It has been brought forward and rejuvenated every time a new advance has been made in bacteriology, beginning with the discovery of the tubercle bacillus. Each time the subject is rejuvenated it is espoused with enthusiasm by certain members of the profession and the laity. Yet, there is no more hope or evidence today that cancer is a parasitic disease than there was when Koch discovered the tubercle bacillus. On the contrary, the evidence is even less convincing. There is strong evidence that cancer is one of the degenerative or terminal diseases; natural processes of maturity and death. This is indicated by the fact that cancer, cardiovascular disease, and kidney disease are all on the increase as far as the general population is concerned, while death from infectious disease is decreasing. The increase of these three diseases run parallel. Why this increase? Is it real or only apparent?

## FACTORS IN LIFE EXPECTANCY INCREASE

Forty years ago the average life of the human being born into the world in a civilized country was forty-two years. Today it is fifty-eight years. This increased longevity is chiefly brought about by scientific preventive medicine and hygiene. The mortality from acute infectious diseases, such as diphtheria, malaria, typhoid fever, has been reduced sufficiently to account for most of the increased longevity. Given 100,000 children born today, a much larger per cent of them will die of these three diseases than would have died in 100,000 births forty years ago. But given 100,000 individuals past forty years of age today, there is no evidence to show that a greater per cent of these would die of these three diseases than would have died in 100,000 people past forty years of age forty years ago. This means that there is an enormous increase in the number of people who reach the age of forty, which may be termed middle life, or the turning point at which our body resistance weakens and physical degeneration begins. At this time in life, cancer, cardiovascular disease, and renal disease all begin to develop. The heart valves and blood vessels begin to receive the deposits of lime which replace vital tissues. The kidneys begin to harden and the connective tissue to contract. Normally, new epithelial cells are generated to strengthen and repair areas which are subjected to injury or excessive use. About the age of forty these physical processes begin to wane. Often these repair cells are put into the breach in an immature state and degeneration begins. While the average human life has increased, the maximum longevity has not increased. Man will continue to die. If he escapes accident and infective diseases, he will nevertheless finally die of a degenerative or terminal disease.



## ANALOGY OF CANCER AS A WEED

Most people are acquainted with farm life. I have found the average individual may understand the analogy of cancer to a weed or pest on the farm. In opening the subject to a layman, let us assume that a noxious weed comes up in the farmer's field. It is strange to him. He looks it over, trying to decide what to do. It has a beautiful flower and might well be cultivated in a flower garden. Let us suppose that he decides that he will destroy this weed. If he destroys the weed at this time, the menace is destroyed. On the other hand, let us suppose that the weed matures and forms thousands of seeds which are scattered in an area of a few feet. Next year the farmer sees the menacing increase of this weed. He pulls up all of the weeds and destroys them and the menace is averted the second year instead of the first. On the other hand, let us suppose that the farmer ignores the weed the second year. He cuts it with his mowing machine; millions of seeds are harvested with his hay. The seeds are not only scattered through the hay, but scattered by the wayside, picked up by the birds and carried to out of the way places, so that when the third year comes millions of these weeds are scattered in inaccessible places. The pest is out of bounds of the farmer and is hopelessly distributed throughout the entire section of country. This noxious weed is a cancer. It is not good for feed. It cannot be used to aid the animal life of the community. It toils not, neither does it spin, but it absorbs food from the soil which should be making useful products.

A similar analogy may be drawn with human society. In any large audience there may be degenerates, criminals, mental defectives, and other types. As a speaker looks out over a sea of faces of this kind, he is unable to differentiate the degenerate from the genius or other useful citizen. Yet it is impossible to organize the physical or moral degenerate into a working unit of society. He claims the right to a living and the pleasures of life, but sees no reason why he should enter into a contract with society by which he should do his part of the work. He reproduces his kind, he absorbs all the good things in life necessary to his sustenance and reproduction of his species without giving anything in return. The cancer cell, let us say on the lip, developing at a point where a pipe stem has made pressure and caused irritation, cannot be differentiated except by the most expert microscopist from the normal cells. These cells multiply, reproduce their kind, extract nourishment from tissues in their neighborhood, but they are incapable of being organized into epithelial covering of the lip or mucous glands or blood vessels or any other useful structure. They are outlaws. They are weeds. They are degenerates. They toil not, neither do they spin. The smoker has carried his pipe stem on this spot on his lip through all his young adult life. Nature

has manufactured good epithelial cells and arranged them in many layers so as to protect the lip from this extra pressure and from the irritation of the nicotine by the formation of a callus. After forty, the age of maturity and beginning decline, the reparative processes are more taxed. Nature is tired, sends up cells before they are mature. This is repeated until finally these immature cells begin to reproduce themselves as a species and cancer begins. Cancer is simply an aggregation of immature nonfunctioning cells which cannot be differentiated and organized for the repair of the normal tissues but which reproduce their kind and which seek their sustenance from any source in their neighborhood.

## ANALOGY ON HOW CANCER IS SPREAD

How does the cancer cell differ from the benign cell, is a natural question for a layman to ask. A cancer cell has the power to reproduce its kind after it has been transported to another part of the body. A benign tumor cell will not reproduce its kind when transported to another part of the body. Any tumor whose cells will reproduce when transported to another part of the body will finally destroy life and must, therefore, be classed as a malignant tumor. For example, hypernephroma is not classed as a cancer and yet it produces death of the patient.

How is cancer transported to other parts of the body? This may be presented to the layman as follows: Coming to our homes are water pipes bringing pure water for our nourishment. Going from our home are other pipes carrying away the waste products. These we call sewers. Going to every part of the body are blood vessels carrying nutrition for the sustenance and repair of our tissues. Going away from every part of the body are lymphatic vessels which pick up waste material and float them back toward the central circulation to be carried to certain eliminative organs where they are cast out. Often at the beginning of a sewer, or a sink, there is a filter to prevent undesirable substances from entering the sewer. In the course of the lymphatic vessels there are filters placed there for the purpose of preventing undesirable substances from entering the blood stream. These filters are lymphatic glands. The cancer cell, in its avidity for food and its lawlessness, forces its way into these lymphatic vessels, floats down and is caught in the filters or lymphatic glands. Here the immature or cancer cell begins to multiply and produce another cancer cytologically similar to the parent cancer from which it came. As this second cancer develops, one of its cells in turn may break into the lymphatic stream below and may float on down and be caught in still another filter or lymphatic and the third cancer of exactly the same kind develops. The cancer cell from the third cancer breaks loose and floats down the lymphatic stream beyond the last filter. It enters the blood stream and is carried to remote parts of the body where



it is lodged in a small capillary, too small to admit the passage of a cancer cell, and there it begins to reproduce its kind and forms a fourth cancer entirely out of reach of any means of destruction. When the cancer cell passes the last filter and enters the blood stream the case is hopeless. On the other hand, if no cancer cell has left the parent growth and the parent growth is destroyed or removed by any means whatsoever, the cancer is cured. If a single cell has left the parent growth and is caught in a lymphatic gland or filter at a distance from the original growth, simple removal or destruction of the parent growth does no good. Life is not prolonged, for the second growth in the lymphatic gland will proceed at increased speed and produce death just as quickly as if the parent growth had not been removed. On the other hand, if the parent growth and the remote lymphatic gland containing the second growth is removed, the cancer is cured. If any lymphatic containing a cancer cell is allowed to remain the cancer is not cured. If any cancer cell has escaped into the blood stream the cancer is incurable entirely. With this knowledge the layman can understand why a local growth removed by a paste will cure only when the disease is entirely local. He may further understand that an operation for cancer must be radical; must remove all the glands intervening between the growth and the point where presumably the lymphatics enter the blood stream. He may then understand why cancer becomes the greatest emergency. The woman with cancer of the breast, contemplating its surgical removal, may understand why it is not advisable to wait two or three months until a relative comes to take care of the children.

#### TREATMENT

Considering the treatment of cancer, there are two clear-cut lines of procedure:



Fig. 1.—Low cancer of the rectum. The dotted line across the intestine and the severed blood vessels indicates the amount of intestine, mesentery and lymphatic glands to be removed by the radical operation.

1. Radical removal or destruction, not only of the growth itself but of the tissues containing the growth along with the tissues containing the lymphatic passages and glands intervening between the growth and the point where the lymphatics presumably enter the blood stream or pass into inaccessible anatomical depths.

2. Destruction of the cancer cells as they lie in the tissues without destroying the tissues themselves.

The first or radical removal procedure is accomplished by: (a) surgery; (b) cautery; (c) electro-coagulation.

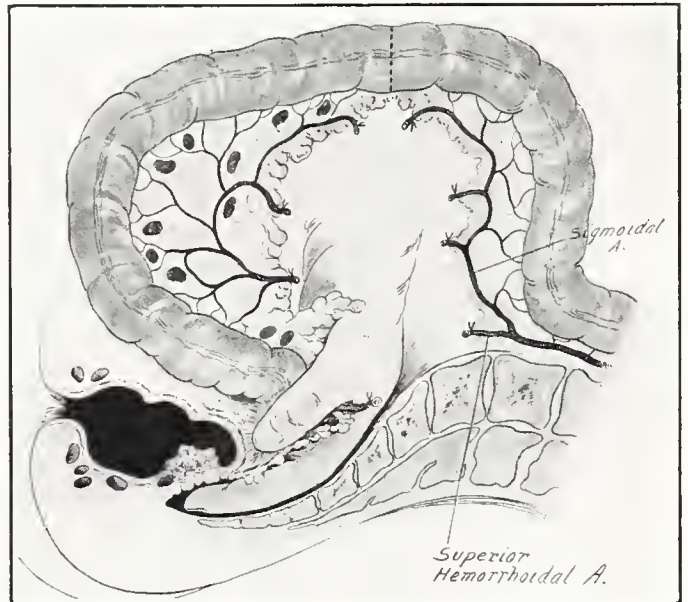


Fig. 2.—After the rectum and sigmoid have been mobilized by cutting the peritoneum on either side of the mesentery and severing the rectal and sigmoid arteries, the fat in the hollow of the sacrum is mobilized down to the tip of the coccyx by finger dissection.

The second or destruction procedure is carried out by the use of radiotherapy: (a) radium; (b) deep x-ray.

It cannot be disputed that surgery is the ideal treatment in most cases of cancer which are so located that not only the cancer in its original site, but the organ containing the cancer, as well as the lymphatic vessels and glands which drain the organ, can be removed. For example, cancer of the lip, the breast, the large intestine and rectum, the pyloric end of the stomach, the body of the uterus and the ovaries and now the bladder.

*Cancer of the Lip.*—Cancer of the lip is a field that is also claimed by the radiologist, and the physician is too apt to thoughtlessly refer a suspicious epithelial growth on the lip to the nearest radiologist. The surgeon who treats a great deal of cancer is appalled at the number of patients coming in for recurrence of epithelioma of the lip along with enlarged lymphatic glands in the submaxillary and submental spaces following radiotherapy. The patient has been referred or has gone by the advice of his physician to an x-ray technician or a dermatologist who uses x-ray or



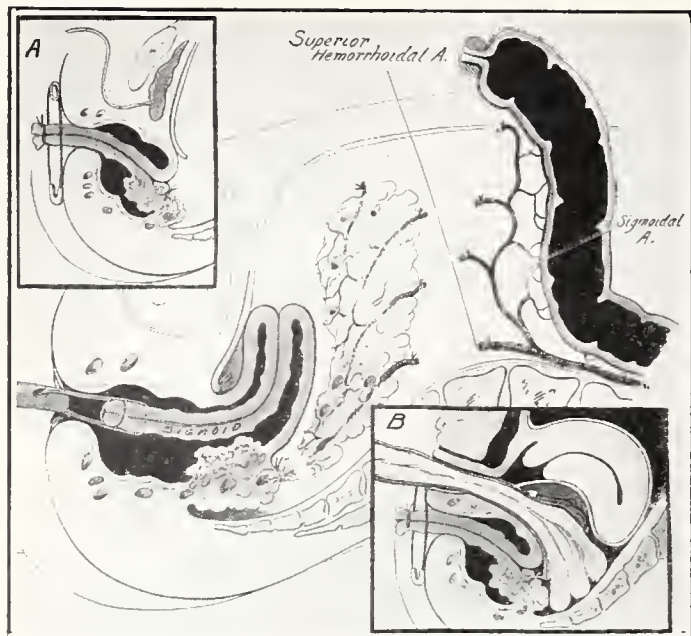


Fig. 3 — Sigmoid is being inverted and drawn out through the anus. The mesentery of the sigmoid and rectum has been ligated and is being removed. The proximal sigmoid is brought out through the left rectus muscle for a colostomy. (A) In the male the inverted sigmoid is pinned outside the buttocks so that it cannot retract. (B) In the female a drainage opening has been made in the posterior fornix of the vagina and drainage placed. Uterus fixed in retroversion.

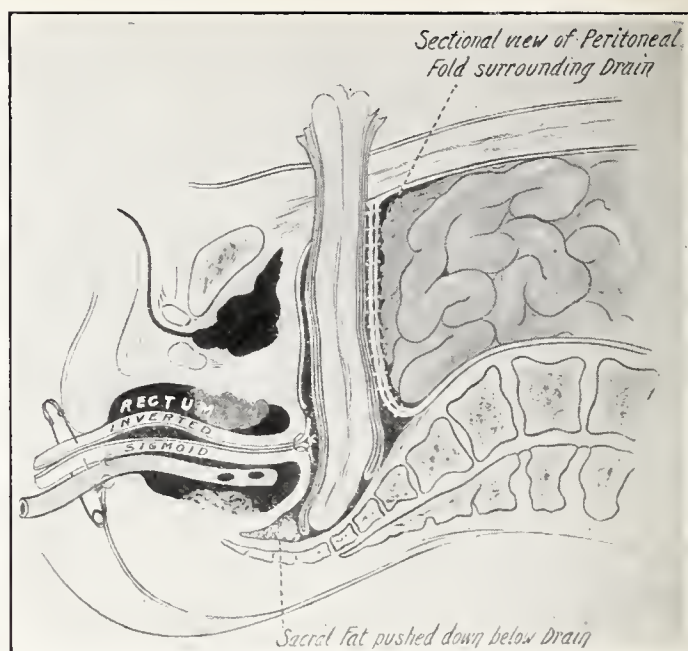


Fig. 4.—In the male, a large protected quarantine drain made of a dozen or more wicks enclosed in rubber tissue, which is made to surround the wicks after they are in place, is placed down to the hollow of the sacrum. It is made extraperitoneal by bringing the peritoneum of the two sides of the pelvis together above the drainage area.

radium. The growth disappears very quickly, and the patient goes on with a sense of peace and safety until the recurrence takes place. At this time his chances of cure have been reduced from 85 to about 50 per cent. Had he been referred to a surgeon in the first place, the surgeon, under local anesthetic, would have removed the growth and a section of the lip without pain and without shock and would have submitted it for microscopic examination. If the growth proved to be very malignant or penetrated the deeper layers of the skin, the submaxillary and submental glands would have been removed and the patient

would have had 85 per cent chance of cure. I think every thoughtful surgeon who sees these cases has reached the conclusion that since the advent of radiotherapy the number of deaths from carcinoma of the lip is greater than before its introduction. The same holds true in cancer of the breast. This is not saying that the most highly skilled radiologists, who are thoroughly grounded in the principles of cancer, cannot get results in many of these cases. But the great majority of these superficial cancers never reach the highly skilled cancer radiologist. Therefore these patients are simply soothed by the tempo-

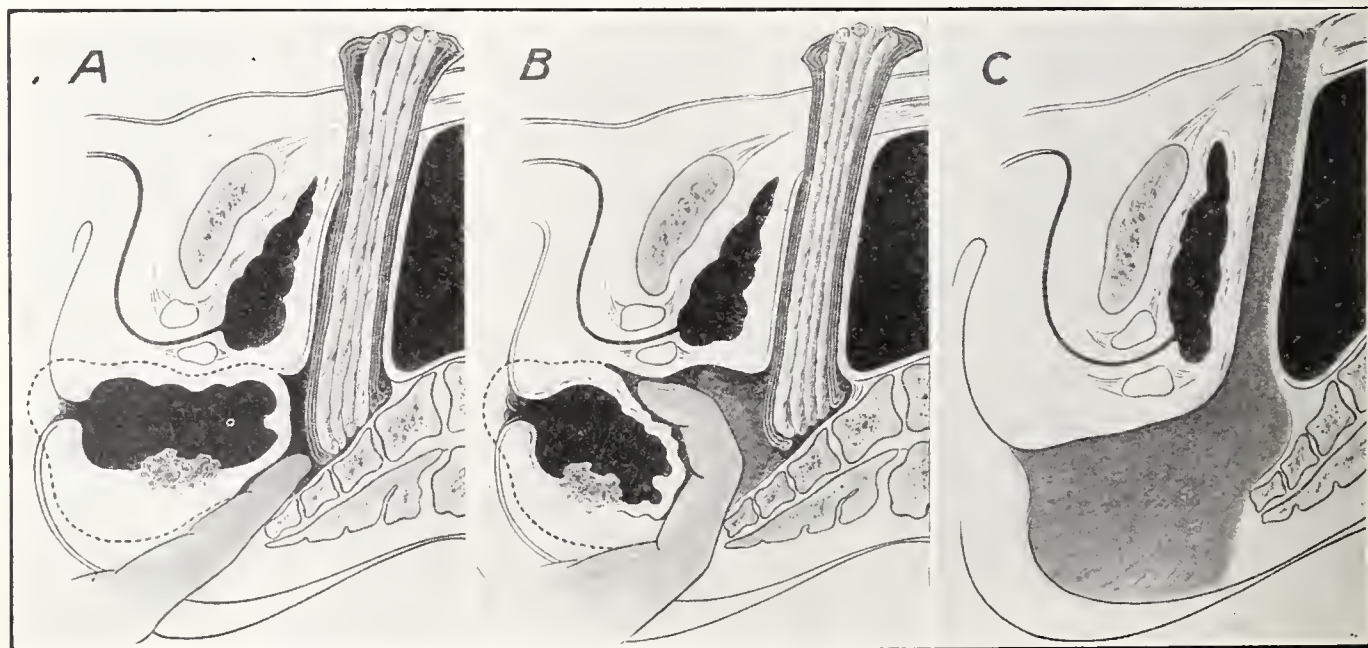


Fig. 5.—Second step of the operation. The coccyx and last joint of the sacrum are removed and, after an incision is made around the anus to include the anal muscles, the fingers easily enucleate the rectum without hemorrhage (A and B), leaving a large open cavity to heal by granulation (C).



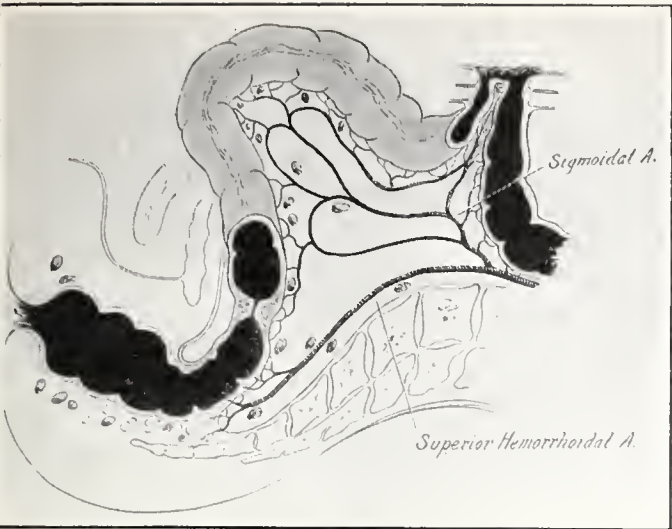


Fig. 6.—In carcinoma of the rectosigmoid we must deal with intestinal obstruction by a colostomy which is left open from two to four weeks before the two-stage operation for removal of cancer of the rectum is begun.

rary disappearance of the growth under inefficient treatment.

For cancer of the large intestine and cancer of the body of the uterus, as well as cancer of the pylorus, surgery holds undisputed sway.

*Cancer of the Rectum.*—In cancer of the rectum and rectosigmoid, which may be reached by radium, the field is in dispute. I think, however, that any surgeon who has had considerable experience in such major surgery as removal of the rectum and who at the same time has access to ample quantities of radium, must conclude that cancer of the rectum must primarily be given to the surgical field when it is at all possible to remove the rectum and possible metastatic glands

entirely. As a matter of fact, cancer of the rectum is probably the most definitely surgical cancer in the body, for here the entire organ may be removed along with all the glands in the hollow of the sacrum and pelvis into which the lymphatics of the rectum drain. The technique for radical removal of cancer of the rectum has been given in *Surgery, Gynecology, and Obstetrics*, June 1924, and in the *Annals of Surgery*, October 1922. In considering surgery for cancer of the rectum, it must be classified in two distinct divisions: High cancer or cancer of the rectosigmoid in which obstruction is usually the first symptom, and cancer of the ampulla of the rectum in which obstruction does not take place early but in which other symptoms appear relatively early and in which the sigmoid may still be inverted and drawn out through the anus at the first stage of the operation. The low mortality and high curability of cancer of the rectum is very encouraging. In cancer of the rectosigmoid the results are not so good. We have another separate problem, namely, intestinal ob-

TABLE 1				
Total cases of carcinoma of the rectum and recto-sigmoid				152
Total patients not operated on	Inoperable even for exploration			13
	Refused operation			6
	Went elsewhere			5
Exploration and pallia-tive oper-ations	Exploration		12	49
	Colostomy with or without radium		32	
	Tube resection		1	
	Radium alone		4	
Rectum			25	
Rectosigmoid			24	
Radical removal	Rectosigmoid including obstructive cases			14
	Rectum			65
				79

struction. This must be dealt with and completely relieved by colostomy before any attempt is made for removal of the cancer itself (Figs. 1, 2, 3, 4, 5, 6, and 7).

My personal experience is shown in the following tables, which represent the results of a follow-up survey made in May 1928:

Rectosigmoid group includes all obstructive cases and includes a large per cent of the mortality of my series. Because of the inclusion of these obstructive cases, and the consequent high mortality, the three-stage operation has been adopted as a routine procedure for rectosigmoid cancer. Therefore statistics in this group are omitted and only statistics on cancer of the rectum proper, in which it is possible to invert the sigmoid through the rectum, will be included.

TABLE 2	
Cancer of rectum (inversion technique)—Mortality statistics:	
Total cases operated upon.....	65
Deaths from operation—4 mortality.....	6.25%

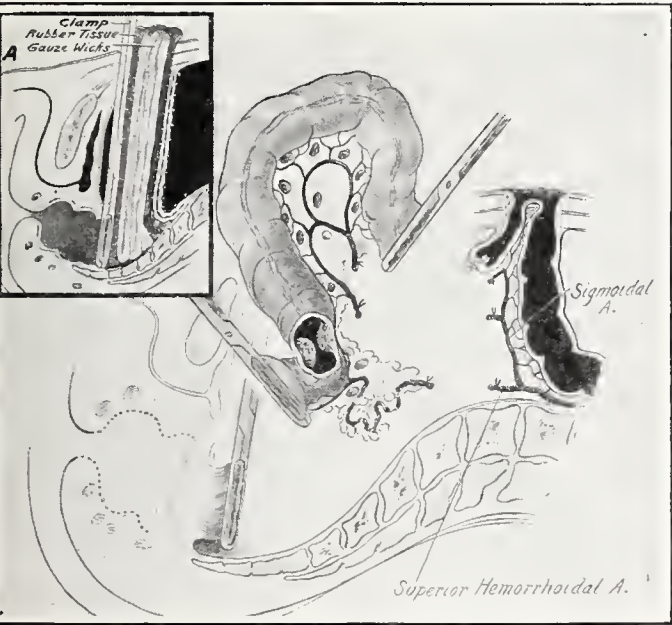


Fig. 7.—Two to four weeks after the colostomy has been performed, the abdomen is opened through the right rectus, the vessels are ligated, the intestine severed and mobilized as in Figs. 2 and 3, after which the sigmoid is clamped and severed between clamps below the colostomy and below the growth. The distal stub of the colostomy is turned in, distal stub of rectum held in a clamp or inverted with a purse string, and the area drained with a quarantine pack (A) as described in Fig. 4. The rectum is later removed as shown in Fig. 5.



End Results

In considering end results only five-year cures are included. Therefore only those cases operated upon more than five years ago are studied. Total cases, 32; deaths, 2; mortality, 6.25 per cent. Of the thirty surviving operations, three have not been traced since operation. Six were traced and were well two years or more after operation since which time we have not been able to trace them. This leaves twenty-one cases for the study of end results.

TABLE 3

End results in twenty-one cases:	
1. Patients dying before the expiration of five years.....	8
Cause and date not known.....	1
Recurrence in liver, three and one-half years.....	1
Recurrence in liver three years.....	1
Cause not known, two years.....	1
Local recurrence of cancer, two years.....	1
Local recurrence of cancer, twenty months.....	1
Local recurrence of cancer, seven months.....	1
Recurrence in lung, eight months.....	1
2. Lived five years or more—(62 per cent).....	13
3. Still alive and well.....	8
Thirteen years; twelve years; six years, four months; six years, three months; six years, one month; five years, eleven months; five years, three months; and five years after operation.	
4. Patients dying after expiration of five years.....	5
Apoplexy, thirteen years.....	1
Pneumonia, six years.....	1
Local recurrence, six years.....	1
Auto-accident, five years.....	1
Local recurrence, five years.....	1

Recapitulation

In thirty-two cases there were two deaths (6.25 per cent). In fifty-four cases still two deaths (3.7 per cent). In sixty-five cases four deaths (6.25 per cent).

Taking into account the inaccuracy of such small statistics, it would seem fair to estimate that a death rate ranging from 5 to 10 per cent in the hands of skilled surgeons may be expected when this technique is used.

In twenty-one traced patients, thirteen lived five years or more, 62 per cent five-year cures. Nine in a series of thirty is a large per cent of untraced patients. To remove all doubt, let us assume that all the untraced are dead; we would still have 43 per cent of five-year cures. I am very sure that at least three of the untraced patients lived more than five years and that it would be safe to predict 50 per cent of five-year cures.

*Cancer of the Bladder.*—Cancer of the bladder, since we have learned to transplant the ureters successfully comes definitely into the field of radical treatment. After a cancerous bladder has been eliminated as a reservoir for urine, we are left to choose between destructive doses of radium and radical surgery. We have used both means with considerable encouragement, but do not feel justified in drawing conclusions at this time.

RADIUM

Considering the use of radium, we must thoroughly consider its physical activities as a therapeutic agent. Generally speaking, a large dose of

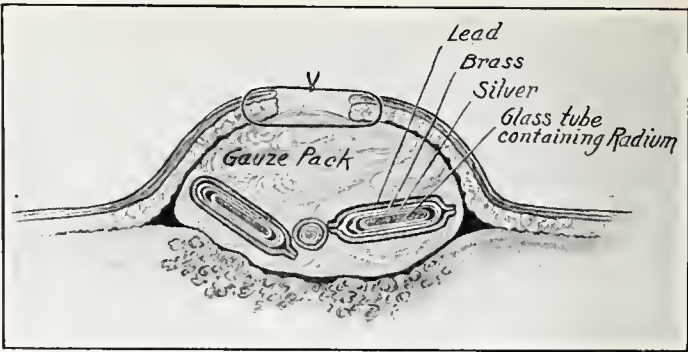


Fig. 8.—Principle of placing large doses of screened radium in an open wound in which the skin flaps have been dissected far back. The skin is held away from radium by gauze and the edges will be sewed together for primary union when the gauze and radium are removed.

unscreened radium, applied close to a given area or growth in large quantities for a sufficient length of time, will destroy the tissues for a given distance just as thoroughly as if the actual cautery had been used. Radium, screened by metallic coverings or located farther away in a limited area, will destroy the cancer cells without destroying the tissue cells. A little farther away the radium destroys some of the cells and by its irritation develops connective tissue which imprisons other cells and holds them inert for a length of time. Still more remote from the radium, a stimulation seems to develop so that the cancer actually grows faster. Therefore the ideal indication for the use of radium is found where cancer involves an organ which is surrounded by other vital structures that must not be destroyed. Such a condition is found in cancer of the cervix uteri, for here we have the bladder in front, rectum behind, and ureters on the sides, and an organ which is thick enough to amply screen the harsh rays of the radium and thereby prevent destruction of the surrounding organs. On the other hand, surgery for cancer of the cervix uteri has not been conspicuously success-



Fig. 9.—Wound which has been closed after subcutaneous application of radium following excision of a cancerous growth.



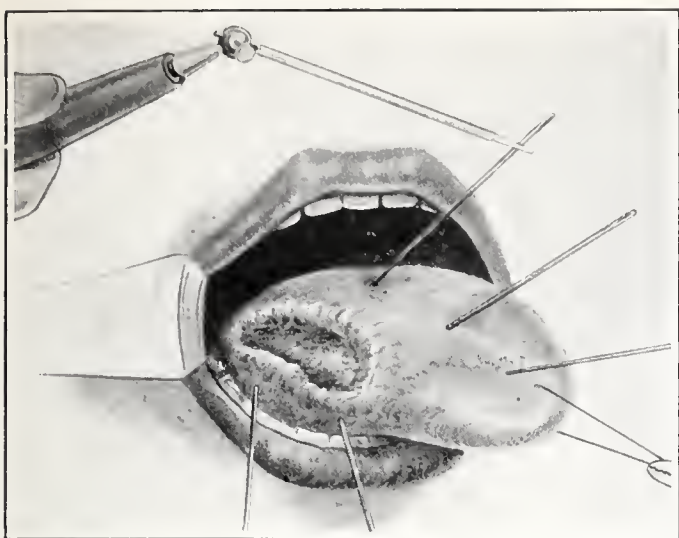


Fig. 10.—Cancer of the tongue. Wyeth's electric endotherm point contacting with one of a series of long needles which have been inserted in different parts of the tongue. Note area of coagulation spreading from the contacted needle.

ful, because: One, it is not discovered early; two, it is difficult to remove the surrounding tissues which are likely to be involved without doing damage to vital organs. In very early cases of cancer of the cervix uteri, there is no doubt that surgery is to be preferred and will give better results than radium. But if we are to consider cancer of the cervix in all stages and base our decision on the number of comfortable days a given number of (say one hundred) cancer patients would have following surgery, as compared with an equal number of cases following radium treatment, there could be no question in the minds of those who have had experience with both agents as to the superiority of radium. While possibly 25 per cent of the cases would yield better results with surgery, the other 75 per cent would be overwhelmingly better off treated with radium while many of the inoperable cases could be greatly benefited and some of them entirely cured by radium. Surgery would mutilate such, resulting in great mortality, without offering any reasonable chance for cure. There is no doubt that a surgeon who has ample radium would use both radium and surgery in the treatment of cancer of the cervix in a considerable percentage of cases.

#### RADIUM AND DEEP X-RAY THERAPY

The field of deep x-ray is very large and it is to be used where a very large area is to be covered, and particularly as a palliative agent in advanced cases or areas where the growth is located out of reach of radium or surgery. It shrinks the lymphatics and retards the growth in deep-seated cases, but probably rarely cures. In some extensive areas of cancer involvement in which surgery is not applicable, radium is possibly better than the deep x-ray. We have found that in advanced cancer of the breast of the acute type in which the skin far away from the nipple is involved, the growth may be removed, the in-

volved skin lifted from the chest a long distance away and a number of twenty-five and fifty milligram tubes of radium, well screened with metal and gauze, packed beneath the flaps, work most admirably with a single dose (Fig. 8). After twenty-four hours the gauze and radium may be removed and the wound closed, with full assurance of primary union and surprisingly good results. This is applicable in the neck and is particularly suitable for recurrence in the supraclavicular glands following a radical breast amputation. It is a routine in our clinic when a supraclavicular gland shows recurrent carcinoma, a skin incision about three inches long is made just above the clavicle. The skin is lifted and the deep fascia separated. The upper involved gland is exposed. A fifty milligram tube of radium in brass and enclosed in one millimeter of lead, one millimeter of rubber, and a one-quarter inch covering of gauze, is packed in the neck directly on the gland. The skin flaps are lifted and the wound is filled with gauze so as to lift the skin away from the radium. Temporary sutures draw the skin across the gauze, where it is left for twenty-four hours. Novocain is then injected into the skin edges as a local anesthetic. The gauze and radium is removed and the wound closed. Primary union without accumulation of fluid is the rule. In most cases there has been no recurrence in the neck. Those patients who have later died have had recurrence in the chest or liver instead of by extension up the neck. A number of our patients have lived two and three years. It seems that the radium applied at this point treats the first supraclavicular gland, which is just under the clavicle, and so destroys the lymphatic glands and vessels that the growth does not go upward.

#### CAUTERY AND ELECTROCOAGULATION

Much has been said about the electric knife and electrocoagulation, so-called electrosurgery. I have an elaborate outfit of this kind, procured at considerable expense. I am frank to say that I have not been able to see as marked advantage over the ordinary cautery as I had expected. As

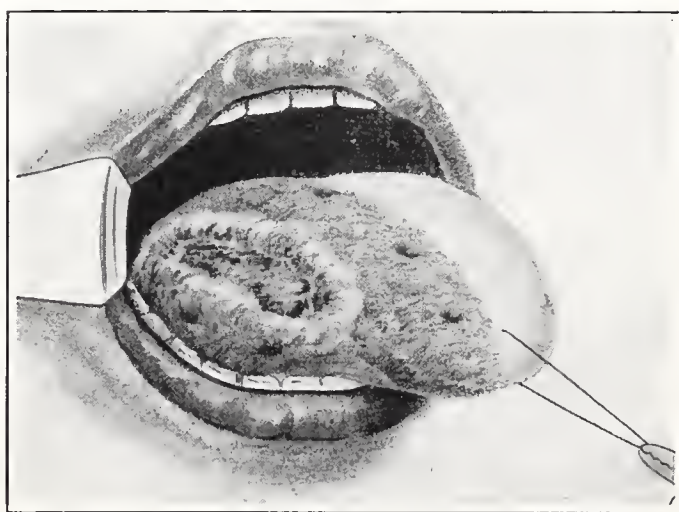


Fig. 11.—Right half of tongue has been coagulated by electric currents.



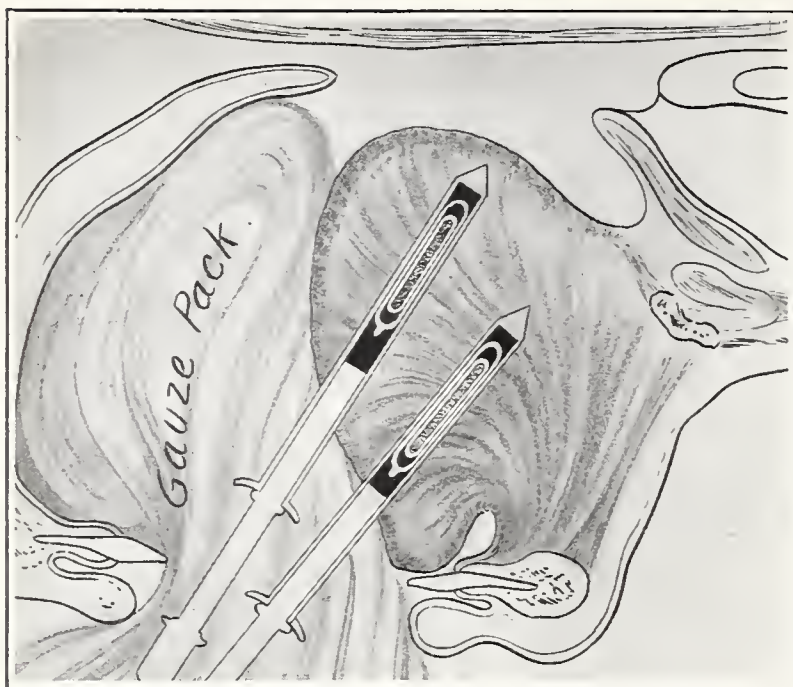


Fig. 12.—Trocars have been converted into containers for 50 milligram tubes of radium which are driven into the coagulated half of the tongue near its middle. Mouth is packed with gauze and patient kept under morphin while radium is in place.

to the superiority of an electric knife or cautery knife over a steel knife, I have not been fully convinced. It seems reasonable that if we cut entirely outside the cancer it really does not matter what kind of a knife we use. The patient will be cured anyway. On the other hand, if we cut through a cancer, it does not matter what kind of a knife we use; the patient will not be cured anyway. Those more skilled with an electric knife or cautery knife may do better work with these agencies. Good surgeons who are not skilled with these agencies will probably do better with the ordinary knife. One skilled in both methods will use both knives, to suit the case in hand.

The one outstanding field for electrocoagulation is in the mouth, particularly in cancer of the tongue. By passing a loop of thread or silkworm through the tongue, it may be pulled out and easily anesthetized. Let us consider a cancer located midway between the tip and base of the tongue on one side. The tip of the tongue is first anesthetized around the traction loop. The tongue is then drawn out. The left index finger is passed down to the base of the tongue. With a long needle, the tongue is fully infiltrated with novocain solution on the side of the raphe corresponding to the growth. Long needles are then inserted in the tongue near the raphe and the one farthest back is pushed almost to the surface of the root of the tongue, the finger acting as a guide to avoid injury to the epiglottis. The coagulation current is made to contact the various needles until the entire side of the tongue is cooked and turns black. Two fifty milligram tubes of radium, enclosed in silver capsule and put in large trocars in which a trocar point closes the end, are driven into the dead side of the tongue, following the holes from which the coagulation needles have

been removed. The lower or more remote trocar containing radium is driven through the length of the tongue, well down to the base but not puncturing the mucous membrane. The other trocar stops somewhat nearer the tip. If the floor of the mouth is involved with the cancer, extra radium needles are driven into this area. While the tongue is pulled out, a large pack of gauze is made to fill the entire mouth, literally stuffing the mouth, including the buccal cavity. The ends of the radium containers are brought out through the mouth. The teeth are held apart with the gauze, and radium containers are firmly fixed by the gauze pack. Patient is then given morphin in doses sufficient to keep him entirely comfortable. The radium may be left in for twenty-four hours. We have used as much as four thousand milligram hour doses in this way at one treatment. If properly packed, there is no injury to the other mucous membrane and the treatment is most thorough.

A few days later the dead tongue may be trimmed away. The patient has one-half of the tongue left, which has been thoroughly radiated (Figs. 9, 10, 11, and 12). We have tried no other method of treatment of cancer of the tongue that is comparable to this combination.

611 Lovejoy Street.

### CHRONIC NONVALVULAR HEART DISEASE— ITS CAUSES, DIAGNOSIS, AND MANAGEMENT\*.

By HENRY A. CHRISTIAN, M. D.  
*Boston, Massachusetts*

AMONG adults this is the form of chronic cardiac disease encountered most frequently, comprising, in my clinic at the Peter Bent Brigham Hospital, 61 per cent of the patients diagnosed as having some form of chronic heart disease in a ten-year period. By chronic non-valvular heart disease we understand that form of cardiac failure in which the defective function is due to myocardial disturbance, for in these patients valves and pericardium show no organic lesion. Usually there is cardiac hypertrophy and dilatation; rarely there is an interstitial (fibrous) myocarditis; there may be coronary sclerosis, but in very many of these patients the arteries of the myocardium are normal. Microscopically there may be evidences of degenerative changes in the muscle fibers, but in the majority of cases the microscope reveals no change other than hypertrophy of the fibers. Occasional foci of round-cell infiltration and scattered areas of fibrosis may occur. Generalized fibrosis rarely is found.

It would seem as if we had, in these patients, the paradox of a powerful, healthy looking heart

\* Annual Scripps Metabolic Clinic Lecture before the San Diego County Medical Society at La Jolla, California, January 25, 1930.



muscle, which actually was unable to carry on the ordinary circulatory function needed in daily life. It does seem to be a fact that once the heart has enlarged, it has already begun on a career of increasing inefficiency. Four years ago, in an address before the Southern Medical Association, I stated it in this way: "It seems to be a clinical fact that, so soon as a heart begins to enlarge, it has commenced a cycle of changes that, in a relatively short time, will result in signs of some circulatory disability." Within a few weeks Cloetta (*Journal of the American Medical Association*, November 9, 1929), has expressed the same idea, saying: "Contrary to the former conception, I now consider every heart with dilatation and hypertrophy as in an abnormal state and of diminished efficiency."

#### CAUSES

If heart hypertrophy is a malevolent rather than a benevolent process, the real problem then is, what causes the heart to hypertrophy? Various explanations have been offered. A popular explanation is that it is a work hypertrophy, incident usually to hypertension. Some observers go so far as to say that in all patients of this group there has been, at some time, a maintained hypertension, even if blood pressure is normal when the patient is observed after cardiac failure has begun. I believe, however, that observations have been made over long enough periods prior to cardiac disturbance in enough patients to justify not agreeing that hypertension has been a cause of this change in all cases. In many of the patients, however, it has existed. However, some other causative factor must enter, for so often we observe patients who have sustained hypertension for long periods without cardiac hypertrophy as well as those with cardiac hypertrophy and no hypertension. Furthermore in such individuals as long-distance runners, who place an increased amount of work on their circulation, there is no cardiac hypertrophy or dilatation. The heart actually grows smaller during a twenty-five-mile run in a successful long-distance runner.

Arteriosclerosis and syphilis are not present often enough to be important causative factors. Rheumatic fever has not occurred. Infections at times seem to have a very direct relationship, but various infectious diseases and focal infections seem no more frequent in this type of cardiac disease than in similar control groups with no cardiac disease. Valve lesions do not occur, except dilatation of the valve ring after the process is well advanced. Arrhythmias appear too late to be of any significant causative effect.

In other words, no common antecedent condition can be discovered in studying the past history of these patients to account for the development of the cardiac disturbance.

There are experimental studies indicating that strain of not long duration may lead to subsequent hypertrophy and dilatation of the heart. Strain, combined with varying other factors, such as hypertension, infection, etc., may play an important rôle in etiology.

It is probable that the relationship of the cardiac musculature to a blood-containing cavity, as in the heart, may determine a difference between the response of cardiac and skeletal muscle to increased demands on their function. In the heart, in order to increase cardiac output, cardiac cavities must dilate. This stretches the muscle wall. Increased tension on muscle fibers is known to increase the amount of work a muscle can do. If hypertrophy is a response to this physiologic process, then the cavity enlarges more and this repeats itself in cycles. As Cloetta has put this, "It must not be forgotten, however, that the heart is a spherical organ and that it contracts around a fluid content. No sooner does the heart dilate than this fluid mass or resistance increases, thereby partly nullifying the advantage gained by dilatation. Thus a stage must be reached at which improvement due to cardiac hypertrophy is overcompensated by the greater load, and this is where cardiac insufficiency really begins; the heart has stretched itself beyond its physiologic limits and signs of insufficiency, such as diminished volume of beats and lessened capacity, begin to appear." This seems to be what happens.

#### DIAGNOSIS

Diagnosis of this type of cardiac failure is not difficult. There are the usual evidences of cardiac insufficiency. There are the physical signs of cardiac enlargement, for it is very rare for the heart not to be enlarged. Evidences of valve lesion are lacking. There is no history of rheumatic fever. Most of the patients are past forty. A systolic murmur may be heard or there may be no murmurs. Rhythm often is regular, but there may be extrasystoles or auricular fibrillation. Other arrhythmias occur but are unusual.

Two groups of these cases are misdiagnosed with considerable frequency: (1) The markedly edematous patient with a regular, not very rapid, pulse often is considered as a case of nephritis with edema. The urine, containing albumin and casts, suggests nephritis, but the urine picture is due to passive congestion of the kidney, as shown by the speedy disappearance of albumin and casts as a sequence to adequate cardiac therapy. (2) The patient with paroxysmal type of dyspnea is regarded as having bronchial asthma or asthmatic bronchitis, the underlying cardiac disturbance having been overlooked, in part due to the increased difficulty in making out the enlargement of the heart owing to pulmonary emphysema, and in part owing to the physical signs of chronic bronchitis so often seen in patients of this type.

These two diagnostic mistakes are of more than academic interest because, if the cardiac disturbance is not recognized, the patients are given treatment appropriate to the erroneous diagnosis of nephritis or asthma and fail to respond, whereas if treated as patients with cardiac failure the response often is dramatically successful.

#### TREATMENT

Treatment for these patients is that for other forms of cardiac failure, with rest in bed, diet, digitalis, etc., in adequate dosage. In the ones



with more marked edema diuretics may be required to remove the edema though very frequently the digitalis is all that is needed. Any form of potent digitalis is satisfactory, and any method of dosage may be followed. The important thing is to give sufficient digitalis to produce a digitalis action.

It is a common error to believe that in this group of patients digitalis has little effect in the absence of auricular fibrillation. It is true that digitalis produces marked therapeutic effects in patients with auricular fibrillation. It is equally true that it is just as effective in patients with regular rhythm. In the two groups of patients already mentioned as frequently misdiagnosed as nephritis with edema or bronchial asthma respectively, digitalis therapy often gives brilliant effects. What can be more dramatic than the rapid disappearance of excessive edema or the cessation of paroxysms of severe dyspnea, as one so often sees follow adequate digitalis therapy in these patients?

In patients with chronic nonvalvular cardiac disease one often sees great benefit from a daily ration of digitalis, 0.1 to 0.15 gram of powdered digitalis leaves per twenty-four hours, or corresponding amounts of other digitalis preparations, kept up long after all obvious evidences of cardiac insufficiency have disappeared. As I watch these patients I am becoming more and more convinced of the value of this form of usage of digitalis and inclining more and more to use these daily doses of digitalis in patients with cardiac hypertrophy even before there develop any very evident signs of decompensation.

Digitalis is a drug peculiarly well adapted to give a continued effect from interval doses. The pharmacologists have taught us the underlying principles responsible for this. We have learned that as digitalis circulates through the heart muscle, it passes through the vessel wall to become fixed in the heart muscle, where it is inactive until it is split up into an active form, a toxigenin or aglykon. This splitting up goes on gradually and the split-product produces the digitalis effect. Straub and Cloetta have been particularly active investigators in this matter. This is the process that permits of continued digitalis effect at a reasonably steady rate without any toxic effects. If the amount of digitalis given in a single dose is increased beyond a certain point, then this new digitalis is fixed in the muscle before that previously there has been split up completely and has finished producing its digitalis action. So cumulative and toxic effects appear.

There is experimental work to indicate that continued use of small doses of digitalis in animals with damaged aortic valves retards cardiac hypertrophy. If so, then there is additional reason for giving digitalis in daily rations in the early stages of the development of those cardiac lesions now under discussion, for, as we have already seen, hypertrophy in itself, as it increases, is a detrimental process. These experiments are in accord with certain clinical observation of the

benefit from continued use of small doses of digitalis.

Diuretics are very valuable drugs to remove excessive edema not satisfactorily decreasing from digitalis alone. Diuretics should be given at the time digitalization has been obtained. Diuretics are more satisfactory in their results when given in one or several doses before noon and not repeated on the next or second succeeding day. Of them I have found theobromin sodiosalicylate (diuretin), 0.5 gram by mouth at 8, 10, and 12 o'clock; theophyllin (theocin), 0.3 gram the same way; novasurol (merbaphen) and salyrgan (both given as one dose early in the day, preferably intravenously) most useful and effective, as a rule, in the order in which I have named them. Of these the first two have the advantage of effectiveness by mouth dosage, while the second two require intramuscular or intravenous routes of administration, preferably the latter, as they are somewhat irritating even after deep injection. The second two act better after a preliminary period of three to four days on which the patient receives from three to four doses of one gram of ammonium chlorid or ammonium nitrate. Larger doses of these, as often recommended, may cause nausea and, in my experience, give no better results than the one-gram doses just advised. If there is gastric upset, the ammonium chlorid may be given by rectum.

Treatment along the general lines, as just described, gives very satisfactory results, and often it is most surprising how much may be accomplished in patients apparently in very bad condition. The skillful combination of these methods to obtain such results is the evidence of that sound clinical knowledge which our patients should expect of us.

Peter Bent Brigham Hospital.

## EPIDEMIC CEREBROSPINAL FEVER ON THE PACIFIC COAST\*

By J. C. GEIGER, M. D.  
San Francisco

EPIDEMIC cerebrospinal fever occurs with piquant irregularity. Indeed, since the outbreak of 1904-05, this disease has been sometimes epidemic, sometimes sporadic, without complete cessation. Europe, Africa, South America, Australia, and China have been harassed.

### EPIDEMIOLOGY

In other words, the disease has been pandemic practically over the world between 1904-10 with never a real quiescent period in the United States or Europe. In fact, in the United States, each winter, in one locality or another, groups of cases have occurred. There is no doubt that severe epidemics leave viable foci which add to the continuity of the propagation of the disease. The meningococcus only survives in nature in the human being. The epidemiology is by no means as simple as it seems. The epidemiology of pneu-

\* Read before the Pacific Interurban Clinical Club, San Francisco meeting, December 19 and 20, 1929.

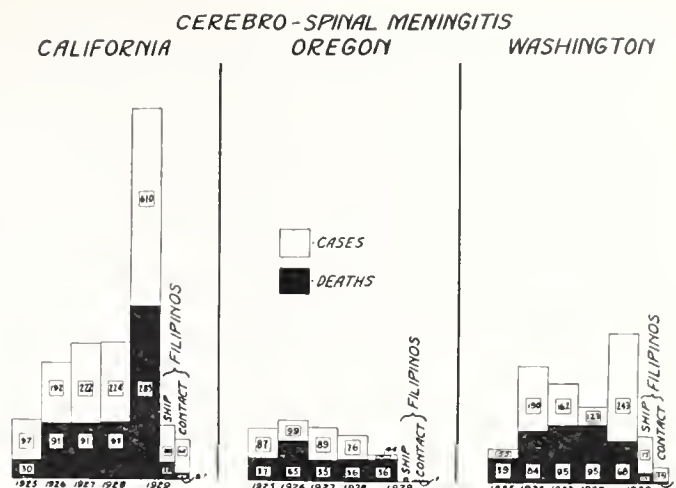


monia has often been contrasted with that of epidemic cerebrospinal fever. Apparently the latter disease only reaches epidemic proportions not as much to case contact as from chronic carriers. Constituting as they do an often unsuspected and innocent participant, they become malevolent agencies, usually in the vicinity of cases in the spread of the disease. The carrier generally outnumbered the cases many to one. Consequently their detection and control, mainly because of the fact that the meningococcus is decidedly selective in medium and infinitely sensitive to environment and technically difficult to recognize, makes boggyhaunted creatures of painstaking and careful health officials. The sporadic character of many of the cases speaks for a widespread resistance of the disease in the general population. This assumed resistance may be to the causative strain itself. The low case incidence is, however, laid to the door of the carrier, for it is stated, and oftentimes accepted, that the case incidence is dependent on the carrier incidence reaching a comparatively high ratio around twenty. That this does not always hold true can be shown by the carrier incidence recently found aboard ships on which cerebrospinal fever had occurred. This carrier incidence was exceedingly low (2.5 to 4 per cent), even in the face of the known close contact so apparent in the steerage. Therefore, in some outbreaks, there may be a racial or otherwise increased susceptibility to the particular causative type strains and this was probably true in the Filipino cases. Certainly, when large aggregates of people are brought together from divergent communities, the presence of a carrier of meningococci may be a foregone conclusion.

#### RÔLE OF CARRIERS

Of practical importance are the measures to control carriers and the culturing of carriers. The results have not been brilliantly conclusive even under controlled conditions, as in military camps. The persistence of the carrier state is, conceivably, one important condition for consideration. Carriers may persist for weeks. Norton,<sup>1</sup> in his large experience in the outbreak in Detroit in 1928-29, states: "The persistence of carriers is a point of some importance. We were able to follow most of our carriers for two weeks but no longer, since that time was fixed in our isolation regulations. Again using the three divisions of the six months' study—in the first period 32.8 per cent of carriers had not given two consecutive negatives before release, in the second period 25.6 per cent, and in the third period 30.4 per cent had not satisfactorily cleared up. While the advent of warm weather was coincident with a great decrease in the number of carriers, proportionately the tendency to persist was about the same.

"It is necessary to stress the uncertainty of obtaining accurate results in the detection of meningococcal carriers. We have had many experiences which convince us that conclusions from our laboratory data must be drawn with care. Either the carrier state is an intermittent one or our



technique is not sufficiently exact—possibly both. Sometimes inconsistent results can be explained, but at other times not. One of our contacts gave the following results for meningococci, minus, plus, minus, minus, and accordingly was released. One week later she was sent to the laboratory by her physician because he found that she had been using a gargle during the time the last two negatives\* were obtained. The next four examinations gave plus, plus, minus, minus. One month later she was still negative. This is by no means an isolated instance."

Moreover this same author covers another argumentative point as follows: "Crowding is supposed to be a factor in meningitis. Presumably, in a civil population we would expect to find a higher percentage of carriers in crowded rooming houses than in residential districts containing five or less persons to a home. The 131 cases investigated between February 6 and March 31 were grouped on the basis of number of contacts per case. In the group with four or less contacts per case there were fifty-one cases and 157 contacts, of whom sixty-four, or 40.7 per cent, were carriers. In the group with five to nine contacts per case there were seventy-one cases and 446 contacts, of which 211, or 47.2 per cent, were positive. The final group, with ten or more contacts per case, was composed of nine cases and 106 contacts, of which fifty-seven, or 53.7 per cent, were carriers. These figures indicate a somewhat greater tendency for carriers to be found in the more crowded houses. However, the figures for the second period (April 1 to June 1) show just the reverse, being 15.2, 15.2, and 11.9 per cent for the three groups respectively."

#### PAST CEREBROSPINAL FEVER EPIDEMICS

The history of cerebrospinal fever indicates periods of high incidence recurring at fairly long intervals. The Great War years, 1915-18, could be considered epidemic periods. Similarly, 1928-29 was an epidemic period. The future is only problematical. The expectancy by weeks in California is about five cases. Last week this was four times as great. In the period of 1913-16, the case incidence could be considered low or our normal expectancy two cases per 100,000 popula-

\* Negative for meningococci. Other organisms are always present.



tion. In 1918 the case incidence was six times greater than the assumed expectancy. The present increased incidence began about 1925. The city of New York showed, in 1928, a higher mortality rate than in the previous eighteen years. The city of Chicago reported similar increased incidence. In fact, Pope and White<sup>2</sup> reported as follows:

"After a lapse of some ten years, during which epidemic meningitis persisted at a uniformly low level, the disease assumed serious proportions in Chicago in the spring of 1927. Since that time over 450 cases and 220 deaths have been reported and the disease still continues in epidemic proportions.

"The peak of the outbreak appears to have been reached in the spring of 1928, but the high incidence has continued through two summers and there is every indication of its lasting at least another winter. In addition to its sustained prevalence this epidemic is notable for its high case fatality, in spite of the fact that practically all cases received antimeningococcic serum."

#### CEREBROSPINAL FEVER IN PACIFIC COAST STATES

The Public Health Reports<sup>3</sup> stated in summarizing the situation that "the reported incidence of meningococcus meningitis for January 1929 represented the highest attack rate for that disease since 1918." No mention was made of the Pacific Coast states. California, as well as Oregon and Washington, reported a decided rise in number of cases in 1926. In fact, this increase was manifest in Oregon in 1925. The important thing to observe is that the increased incidence was maintained for 1927 and 1928 for reported cases and deaths. Likewise, cases were continuously being reported throughout the summer months. For instance, Washington reported in 1925, 55 cases and 39 deaths; in 1926, 190 cases and 84 deaths; in 1927, 162 cases and 95 deaths; in 1928, 123 cases and 95 deaths; and for January to September 1929, 243 cases and 68 deaths. The number of cases reported for August, sixteen with two deaths, may prove to be a statistical warning as to increased winter expectancies. Oregon reported in 1925, 86 cases and 37 deaths; in 1926, 99 cases and 65 deaths; in 1927, 89 cases and 35 deaths; in 1928, 76 cases and 36 deaths; and for January to September 1929, 44 cases and 36 deaths. Oregon's definitely high mortality rate may perhaps be explained on incomplete reporting. Here again cases continue to be reported through the summer months. California reported in 1925, 97 cases and 30 deaths; in 1926, 192 cases and 91 deaths; in 1927, 222 cases and 91 deaths; in 1928, 224 cases and 93 deaths; and for January to September 1929, 610 cases and 285 deaths. The number of deaths, however, are not available for August.

The situation as to cases in steerage passengers appeared at first to be not serious and gave little concern to health and shipping officials. The disease was practically limited to steerage passengers of one line and mainly prevalent in one nationality, the Filipino, whose individual resistance to

the causative strain of organism was probably low. The two Pacific Coast ports most affected were Seattle and San Francisco. Since November 1928 there occurred on ships en route to these ports from the Orient, in only steerage passengers of one ship transportation company and on sixteen ships, 193 cases of acute cerebrospinal meningitis; 166 of these were Filipinos, 21 were Chinese; two were Japanese; and four, two of which were Chinese, were members of the crew. Many of these died at sea. It was interesting to note that cases were found on five ships on two different trips. These trips approximate sixty days in length. On three ships there occurred a small number of cases on the first trip. On the following trip, however, from the Orient, cases were remarkably increased, even reaching as high as forty-three for the trip. There were no cases reported on any of the trips to the Orient from the states. Until laboratory search for carriers and reasonable control of contacts were fully established in the ports affected, contact cases in the general population did appear probably as a result. Such contact cases should primarily be most prominent in resident Filipinos.

Oregon, however, reports for 1929 only one case and one death in Filipinos and that in April; Washington reports twenty-six cases or approximately 10 per cent of the total, and three deaths in Filipinos, exclusive of ship cases; and in California, where statistical data are only available as to Filipino nationality in the city and county of San Francisco, in the county of San Joaquin, the county of Monterey, and in the city of Sacramento, San Francisco reported (January to June 1929) fifteen cases in Filipinos, exclusive of ship cases. The county of Monterey reported thirty-three cases; San Joaquin County, fourteen cases and six deaths in Filipinos; and the city of Sacramento reported three cases since the beginning of 1929. The available data would indicate that there were sixty-five or approximately 10 per cent of the total possible contact cases in Filipinos in California for the above communities and period under discussion.

If it were possible to determine the population contact rate of Filipinos for cerebrospinal meningitis in the states of California and Washington such rates would perhaps be comparatively high.

There has been specifically stressed the appearance of this disease among Filipino steerage passengers on ships of one company arriving in Seattle and San Francisco from Oriental ports. Apparently the measures advocated by health officials and presumably adopted by the American shipping company involved, have been efficacious; for all ships have arrived "clean" since sailing from Manila, as far back as May 11. Epidemiologic information is available, however, that the epidemic of this disease that had been prevailing in Shanghai, China, passed its peak in April. This declining epidemic incidence in this port which is touched by these ships, and the prevention of contact of evidently highly susceptible Filipino steerage passengers, with possible cases and carriers in Shanghai, may be of significance



in the light of the absence of recent cases on ship-board. On the other hand, the Oriental epidemic may be only subsiding until winter. The other interesting point is the extraordinary executive order of President Hoover dated June 21, 1929, taking cognizance of the epidemic and the subsequent promulgation of additional regulations by the United States Public Health Service made effective in July. These regulations go as far back as the Navigation Act of 1882 and drastically reduce the present steerage (capacity 75 per cent), basing it on cubic feet space rather than on certain ventilation requirements. Whether this can be made to apply to shipping companies other than American, thereby establishing equal competition and equal curbing of Filipino immigration, is an argumentative point. The presidential order calls attention to the overtaking of available quarantine facilities in ports. In this connection it could be earnestly urged that these much needed appropriations by Congress, particularly in Seattle and San Francisco, be made. The apparent clearance of the epidemic of this disease on ships antedating the present regulations must make it exceedingly difficult for the shipping company involved, particularly because of the drastic cut in steerage capacity, to grasp their public health significance. Moreover the whole situation, with reference to meningitis, shows the urgent need of prompt exchange of epidemiologic information throughout the world for diseases transmissible by means of ships and on the other faster commercial transports, the aeroplane. Unfortunately our quarantine measures do not generally keep pace with our rapidly changing transportation and sometimes with the available scientific information.

The generally accepted classification as to groups is that of Gordon. These immunological groups, four in number, were demonstrated during the World War. There are yet some differences to reconcile, but presumably the meningococcus strains are homogeneous and true to type among which there exist well-defined immunological groups. Apparently, also there are aberrant or so-called intermediate strains that do not lend themselves to definite serological classification within the well-known groups. For a well-balanced therapeutic serum it is considered by many workers to include a number of strains in its preparation. The types isolated in the California outbreak of 1928-29 were six strains of type one, and five strains of type three, Gordon classification. The group type or types involved in the present Oakland cases are not as yet known.

The mortality in the ship cases was high. In fact, the case mortality rate in California from 1922-25 inclusive was 36.6 per cent; in 1928 it was 44, and in the epidemic period of 1929 it rose as high as 50.8. The Oakland cases now are showing a rapidly fatal clinical type of the disease. Many cases of meningitis, if investigated early, show organisms in the blood and, of course, some of these may be only a true meningococcus septicemia without meningeal symptoms. The mortality rate for serum-treated cases should be around 16 to 37 per cent. One of the argumenta-

tive points is the use of sera with low titre when tested against causative or unheated strains. Whether high agglutination titre serum is therapeutically more effective is not susceptible to laboratory proof, as we have no method other than clinical of gauging its value accordingly. One of the failures of sera treatment is accredited to spinal subarachnoid blocking, and therefore punctures of the cisterna magna has become an optimal route of treatment. There appears to be no doubt that different strains of meningococci may be active in epidemic, and in interepidemic periods. Epidemiologically this may be of doubtful importance. The potency and efficacy of available anti-meningococcus serum, however, is of serious clinical importance. Unfortunately the definite guiding factors remain obscure. Therefore other measures, as continued drainage of the spinal cord and chemotherapeutic measures such as a bacteriostatic substance as acriflavine and optochin, have been advocated.

Hooper Foundation, University of California.

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### FRACTURES OF THE SPINE\*

WITH AND WITHOUT OPERATION—A STATISTICAL STUDY

By R. W. HARBAUGH, M. D.

AND

R. E. HAGGARD  
San Francisco

DISCUSSION by Maynard C. Harding, M. D., San Diego; H. W. Chappel, M. D., Los Angeles; Frederick H. Rodenbaugh, M. D., San Francisco.

THE object of this paper is to give the end results in fractures of the lower spine observed in our work with the California Industrial Accident Commission during the past few years.

The investigation was initiated as the result of the controversy which exists between capable surgeons as to the type of treatment advisable. Should it be early operation, or rest, immobilization, etc., without operation?

We have never been particularly impressed with the general statistics advanced to prove medical questions, feeling that most anything can be proved by statistics and that the personal opinion of some enthusiastic investigator was apt to enter into the final result.

#### MATERIAL FOR THIS ANALYSIS

In looking over the available material we find that there are about 175 cases per year that will be suitable for our purposes. That is, cases of fracture of the lower thoracic and lumbar regions. We have attempted to choose fractures of the bodies of the vertebrae and fractures of some

\* From the California State Industrial Accident Commission.

\* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.

TABLE 1.—*Spine Injuries (Rated Between January 1, 1928, and March 31, 1929)*

Operated Cases:			
Fractures of body (compressions, etc.)			18
Fractures of body and lamina and transverse processes			9
Lamina only			1
Processes only			1
No fractures			2
Total Cases			22
Operated twice			2
Total operations			24
Hibbs			7
Albee			14
Combined Hibbs-Albee			2
Operating surgeons:			
San Francisco			14
Los Angeles			4
Fresno			1
Sacramento			3
Unknown			2
Site of Fractures Operated:			
	Hibbs	Albee	Combined
Lower lumbar (L IV to V)		1	
Upper lumbar (L I to III)	3	6	
Upper and dorsal lumbar	1		
Lower dorsal (D IX to XII)	2	5	
Middle dorsal (D V to VIII)			
Upper dorsal (D I to IV)			
Dorsolumbar			
Lumbosacral	1	1	1
No fracture		1	1
Total	7	14	2
Subluxations (in addition to fracture) 3.			

severity. Some error must enter into any final opinion as it is manifestly impossible to obtain exactly comparable cases. In general, however, the cases should average up well in so far as comparative severity between operated and non-operated is concerned. The majority of these cases have been treated in San Francisco and Los Angeles and by leading orthopedic surgeons. The patients have practically all been workmen, the ages ranging between twenty-six and sixty-five years.

The results upon which we are giving this data are based upon permanent disability ratings issued to these men by the permanent disability rating department of the California State Industrial Accident Commission.

TABLE 2.—*Showing Some Rating Elements*

Average Rating:			
Hibbs—7 cases			50.82 %
Albee—13 cases			52.38 %
Combined—1 case			28.25 %
Unsuccessful operations—			
Albee—1			
Combined—1			

Average Rating by Ages and Operation			
Ages	Operated Cases	Nonoperated Cases	Total
Under 26	(3) 57.50 %	(13) 47.51 %	16
26 - 35	(6) 32.58 %	(21) 49.05 %	27
36 - 45	(8) 52.28 %	(23) 49.55 %	31
46 - 55	(5) 63.05 %	(11) 56.41 %	16
56 - 65		( 6) 62.46 %	6
Over 65		( 1) 52.50 %	1
Total	22	75	97

Of seventy-five nonoperated back cases involving fracture of body of vertebra (including fractures also of lamina or processes)—average rating was 51.14 per cent. Of these, sixty-seven did not have any cord injury. Average rating was 45.3 per cent. Of these, eight had cord injury. Average rating was 100 per cent.

Average Age:	
22 operated cases	36.36 years
Nonoperated cases	
67 not involving cord	39.31 years
8 involving cord	28.875 years
75 both types	38.20 years

Average Time from Date of Injury to Date Rated:	
22 operated cases	50.2 months
75 nonoperated cases	39.0 months
67 not involving cord	29.0 months
8 involving cord	46.9 months

HOW THE PERMANENT DISABILITY RATINGS ARE MADE

The ratings are based upon reports from the attending physicians in addition to reports from all physicians who had examined the patients and from the statements by the patients setting forth their complaints and ability to work. In a large

TABLE 3.—*Ratings Given in Twenty-two Operated Cases and Seventy-five Nonoperated, Compression or Body Fractures*

Ages	Under 21%	21 to 40 %	41 to 60 %	61 to 80%	81 to 90%	100%	Total
Under 26							
Operated			2	1			3
Nonoperated	4	2	4			3	13
26 to 35							
Operated	1	3	2				6
Nonoperated	5	6	4	1	1	4	21
36 to 45							
Operated	1	2	1	3		1	8
Nonoperated	4	9	2	2	3	2	22
46 to 55							
Operated		1	3				5
Nonoperated		2	5	4		1	11
56 to 65							
Operated							
Nonoperated		1	3		1	1	6
Over 65							
Operated			1				1
Nonoperated							
Operated	2	6	8	4		2	22
Nonoperated	13	20	19	7	5	11	75

Average rating twenty-two operated cases—50.16 per cent.  
Average rating sixty-seven nonoperated cases—45.30 per cent.



percentage of the cases here reported, I have personally examined the applicant and made an additional written report for the record. In my official position, if my opinions relative to the factors entering into a disability are not reasonably in accord with those expressed by an attending physician or other examiners, I always so state and advise additional examination by an impartial examiner. Our constant endeavor has been to get accurate data on which to base our rating estimate. This has not always been easy. Some physicians surely do not realize what injustice they are doing when they sign their names to inaccurate, haphazard, incomplete reports.

The same method of work is carried on by the Commission's medical staff in Los Angeles. The

TABLE 4.—Study of Operated Spine Cases—Details of Summary							
	Type of Injury	Age	Occupation	Operation	Vertebra Operated	Mos. Before Rating	Rating Made %
JBe	Wedge fracture lumbar I Fracture transverse processes lumbar II Osteoarthritis	44	Stevedore	Hibbs		44.7	100
LJDa	Compound fracture lumbar V Fracture transverse process lumbar IV	40	Helper	Double Albee	Lumbar II, III, IV, V and Sacrum	14.2	25½
GGE	Dislocation lumbar II (complete) lumbar III and IV Fractured body lumbar II Fractured lumbar I	23	Mechanic	Hibbs	Dorsal XII to lumbar V	23.8	60¾
JFi	Compound fracture dorsal XII	26	Repairman	Hibbs		48.3	46¾
CNPo	Back strain	30	Auto Mechanic	Hibbs-Albee	Lumbar III, IV, V and sacrum	26.7	28¼
EPHa	Crushed fracture lumbar I, fracture 3 spinal processes	51	Carpenter	Albee	Dorsal X to lumbar IV	22.0	59¼
HHo	Fractured lamina lumbar II	29	Order Clerk	Hibbs	Lumbar I, II, III	39.7	23
JLaM	Compound fracture spinal process and lamina of dorsal IX	27	Teamster	Hibbs-Internal		12.0	13½
ELev	Fracture spinal process I, II, III, IV, lumbar-sacral subluxation	19	Bricklayer	Hibbs-Albee Hibbs-Modified	Lumbar IV, V and sacrum	31.3	66
WIMcE	Compound fracture lumbar I Fracture lumbar III	53	Janitor	Hunkin	Dorsal XI, XII, Lumbar V	20.5	38½
MMcK	Compound fracture, fractured laminae, spinal and transverse processes, lumbar I	42	Carpenter	Albee-Bilateral		32.1	45¾
NDNa	Exacerbation of hypertrophic osteoarthritis	42	Laborer	Albee	Dorsal XI to lumbar IV	41.1	61
VHNe	Chip fracture articular facet, lumbar III and IV	23	Area Salesman	Hibbs-Modified	Lumbar II, III, IV	24.4	45¾
JSp	Compound fracture dorsal XII, hypertrophic arthritis	37	Carpenter	Albee		46.6	63
Osv	Compound fracture lumbar II and III	51	Carpenter	Albee-Bilateral	Dorsal XII to lumbar IV, dorsal XI, to lumbar V	14.3	59¼
ABi	Compound fracture lumbar III	41	Laborer	Albee-Bilateral	Lumbar I to V	40.9	80¼
WABr	Subluxation cervical VI on cervical VII Fracture anterior superior border cervical VII	36	Laborer	Albee	Cervical VI and VII	25.3	24½
ELea	Compound fracture lumbar II	26	High Climber	Albee-Bilateral	Dorsal XI to lumbar IV	23.6	47
AVi	Slight compound fracture dorsal XII	26	Laborer	Albee	Dorsal IX to Lumbar III	24.8	37
GOM	Fractured dorsal XII	46	Salesman	Albee	Dorsal X, XI, XII	33.0	58¼
TJCo	Compound fracture dorsal XII	47	Carpenter	Albee Albee	Dorsal X to lumbar II Dorsal XII to lumbar IV	39.3	100
PHMcL	Compound fracture lumbar I	41	Truckdriver	Albee-Modified	Dorsal XII to lumbar II	61.0	20¼
Average		36.36				31.35	50.159

records of that division are then sent to the San Francisco office for an estimate as to the permanent disability rating.

We have spoken of incomplete records and checking up on surgeons' reports. We would likewise state that we advise insurance carriers when we feel that there are neurologic elements in the case, or when we see that there will be definite improvement.

THE BEST TIME FOR A PERMANENT DISABILITY RATING

Our effort is, however, to leave the time of permanent rating to the attending physician. He should know best when this stage has been reached. Likewise he should realize that we take the case as he presents it over his signed statement to the effect that the condition is permanent. Insurance carriers as a rule are poorly advised by physicians on this point. The average doctor and likewise the insurance carrier seem to be in too great a hurry to get their cases rated and closed. If they would make the same effort to rehabilitate their men that they do to rate them, all parties concerned would be benefited. It is true that some men think their chances of a good rating are impaired by returning to work, but it is likewise more than certain that in the average case the insurance carrier makes no effort to explain the situation and to assure the man that it will stand behind him to the extent that the law obliges it to and that he should return to the work which has been provided for him until maximum improvement has been reached before rating. It does not seem altogether fair for an insurance company to rate and then call the man in every three months in an attempt to get a reduction. Such a method promotes malin-

gering and continued controversy and the injured man never knows what amount he can depend on finally receiving.

TIME AVERAGE IN THIS SERIES

An average of 50.2 months have elapsed in this series between injury and rating in the operated cases and 30.9 months in the non-operated cases. This is decidedly a weak factor if one cares to form any conclusions from this study. It is clear that the nonoperated cases might have made still greater recovery in a few more months. With then, as complete a record as it seems possible to obtain, the rating in these back cases is established by our "Rating Committee." Some of the factors considered are: (1) Ability to work. (2) Range of motion of spine. (3) Pain. (4) Necessity of a back brace, etc. It should be explained here that a rating of 25 per cent, for example, does not mean that this injured man is 25 per cent disabled. It means that he will receive 65 per cent of his wages up to the maximum of \$20.83 per week for twenty-five months. Our rating schedule is based upon the theory that the man will need help for that period of time and after its elapse should have rehabilitated himself, so that he can again earn a living and not be a public charge.

I cannot criticize our conclusions from the standpoint of neurologic factors and hope for compensation, as the same factors would enter into operated and nonoperated cases.

TYPE OF OPERATIONS PERFORMED

As to the type of operation performed, i. e., the number of Hibbs' and the number of Albee's and their modifications we would state that the Albee method has been used twice as frequently

TABLE 5—Spine Injury Study										
Main Cause of Accident	Compression Fracture. Fracture of Body or Articular Facets	Fracture of Body and Lamina and/or Process	Fracture of Lamina and/or Process	Fracture and Cord Injury	Fracture of Spine and Pelvis	Fracture of Pelvis	Back Strain Muscle Strain	Sacro-Iliac and Lumbo-Sacral Trauma	Exacer-bation of Disease or Arthritis	Percent-age Totals
Falls from elevators	44	6	7	6	..	4	3	3	5	42.2 78
Struck by falling objects	8	6	4	..	..	1	..	2	3	13.0 24
Slips and falls	1	..	..	..	..	..	3	5	6	8.1 15
Caught in cave-in	3	..	..	..	1	2	..	..	1	3.8 7
Automobile accident	5	2	..	1	..	3	..	2	2	8.1 15
Thrown	4	..	..	..	..	1	..	..	1	3.2 6
Lifting Straining Sudden body wrenching	1	..	2	..	..	..	4	14	3	13.0 24
Struck by or against object Crushed between objects	2	1	1	1	1	5	2	..	3	8.6 16
Percentage Totals	36.7 68	8.1 15	7.6 14	4.3 8	1.1 2	8.6 16	6.5 12	14.1 26	13.0 24	185



TABLE 6.—Unoperated Spine Injuries—Fractures of Vertebrae

Case	Type of Injury	Age	Rating %	Temporary Disability
A. A.	Compound fracture lumbar II (or dorsal XII)	26	46.75	22.0
C. A.	Compound fracture lumbar II	50	32.50	18.3
J. B.	Fracture lumbar I and II	39	59.00	22.0
M. B.	Fracture cervical I; fracture odontoid process cervical II; fractured skull	43	31.00	25.3
J. B.	Compound fracture lumbar I	23	55.75	34.0
M. B.	Compound fracture lumbar I and dorsal XI	40	45.50	20.3
D. B.	Compound fracture and subluxation lumbar I	29	32.50	41.0
C. B. B.	Compound fracture dorsal IX	33	19.00	23.0
D. B.	Compound fracture (slight) vertebrae	26	18.00	19.0
E. B.	Fracture spinal process lumbar V; marked compound fracture lumbar I; arthritis	53	77.75	26.3
O. R. C.	Compound fracture lumbar I	35	49.00	24.5
A. C.	Fracture lumbar I; arthritis	40	35.50	23.7
D. C.	Compound fracture lumbar II; fracture transverse processes all lumbar vertebrae	21	50.25	15.0
B. L. C.	Compound fracture lumbar I; lumbosacral sprain	35	37.50	21.5
M. P. C.	Chip fracture dorsal VI; fracture dorsal XII through body	41	93.00	27.0
W. D.	Compound fracture dorsal X (or XI and XII?); arthritis	66	52.50	49.3
J. F.	Compound fracture lumbar III	47	47.00	24.7
W. G. G.	Impacted fracture lumbar III	41	64.25	23.7
W. P. G.	Marked compound fracture lumbar II and IV	61	56.00	40.3
G. S. H.	Compound fracture dorsal XII	36	23.25	21.0
H. H.	Fracture dorsal XII; fracture lamina lumbar I	41	34.75	28.0
A. N. H.	Chip fracture lumbar IV	34	37.25	40.3
T. R. H.	Compound fracture lumbar I; fracture right fibula; dislocated astragalus	22	8.50	29.0
W. H. H.	Compound fracture dorsal XII	33	38.50	36.5
R. F. H.	Fractured body cervical IV	46	57.00	23.0
P. J.	Compound fracture lumbar I; chip fracture lumbar III	35	89.50	23.5
C. E. K.	Compound fracture dorsal IX and X	49	47.75	39.3
W. L. M.	Crushed fracture lumbar III; fracture right transverse process lumbar I, II and III; fracture cervical VII	42	100.00	19.7
J. T. L.	Compound fracture lumbar I	55	61.00	34.3
J. L. McA.	Fracture lumbar I and dorsal VII and VIII; and skull	43	25.25	39.3
M. T. M.	Fracture lumbar I	56	28.50	28.7
J. W. M.	Fracture lumbar I and dorsal XII	31	26.00	18.0
A. M.	Compound fracture dorsal XI and XII; posttraumatic pneumonia; empyema	53	79.50	50.3
T. J. M.	Comminuted compound fracture and subluxation lumbar I	25	47.75	30.0
A. B. N.	New compound fracture dorsal XII; old compound fracture lumbar I	42	25.25	17.2
P. H. N.	Bad compound fracture lumbar I	32	32.50	18.2
C. P.	Fracture lumbar V	32	48.50	24.1
J. P.	Compound fracture dorsal XII	42	15.50	19.8
W. G. P.	Slight compound fracture dorsal X and XI; fracture both legs; arthritis	34	62.25	35.2
W. J. P.	Slight compound fracture lumbar III; arthritis hypertrophic type	45	91.00	41.0
J. R. P.	Compound fracture lumbar III, right side (and tenth and twelfth ribs)	44	31.25	27.4
S. R.	Compound fracture and subluxation lumbar I	36	9.75	25.0
T. M. R.	Compound fracture dorsal V	53	63.50	43.1
C. C. S.	Compound fracture lumbar I	40	34.75	51.3
C. Q. S.	Fracture body and transverse process lumbar II	52	59.25	27.7
J. A. S.	Compound fracture lumbar II?	58	41.75	23.4
J. F. S.	Compound fracture lumbar I; fracture left clavicle	26	13.25	20.9
L. B. T.	Compound fracture (slight subluxation) dorsal IV and V; fractured skull	37	84.75	32.4
N. S.	Compound fracture lumbar I; marked wedging (new?); marked arthritis	59	100.00	28.1
M. V.	Compound fracture dorsal XII and lumbar IV; fracture left transverse process lumbar I, II, III	25	17.50	34.4
H. E. W.	Compound fracture dorsal VI	25	8.75	14.9
B. B.	Compound fracture dorsal VIII	37	24.50	32.3
H. A. D.	Compound fracture dorsal VII and IX	24	6.00	18.5
C. E. V.	Comminuted compound fracture lumbar I, II and III; subluxation lumbar II	48	37.50	34.0
H. L. W.	Fracture dorsal IV, cervical IV, V, VI	44	20.75	19.0
C. H. G.	Compound fracture lumbar I	57	91.75	21.0
J. H. W.	Compound fracture lumbar I, and dorsal XI; sacro-iliac sprain; hypertrophic arthritis	57	56.75	24.2
W. W.	Compound fracture lumbar I; multiple pelvic fracture	33	41.50	30.0
F. J. W.	Compound fracture dorsal XII	28	18.25	14.5
O. Z.	Articular fracture lumbar I and IV; arthritis	40	20.25	27.3
W. J. G.	Compound fracture lumbar I; slight subluxation	43	70.50	55.7
J. P. G.	Compound fracture lumbar II and IV; fracture left transverse process lumbar II, III and IV; fractured humerus and neck of femur	41	100.00	47.4
R. B. G.	Compound fracture lumbar I; arthritis	49	57.75	41.6
J. L. J.	Compound fracture lumbar I	25	26.25	42.0
A. N. P.	Subluxation lateral lumbar II, III, IV; fracture lumbar III; fracture right transverse process lumbar III	25	40.75	48.8
J. R.	Compound fracture lumbar II	25	56.25	19.7
G. E. R.	Compound fracture lumbar I	26	19.75	22.3

as the Hibbs' in the cases cited, and that the end results have been practically the same. In regard to the type of treatment in nonoperated cases, it has been in general, rest and immobilization with braces of various types, together with physiotherapy and massage, and such measures. We cannot say just how long treatment has been carried out. We do not feel that such information would be of great value in drawing conclusions, for the treatment would vary too much in each individual case depending, as it does, upon the severity of injury, type of patient and judgment of various physicians. In this paper are given the results in cases rated between January 1, 1928, and March 31, 1929. The cases were chosen as being comparative, to the best of our judgment. These cases show that in sixty-seven nonoperated cases the average rating given was 45.3 per cent. The average rating given in twenty-two similar operated cases was 50.16 per cent. Our conclusions would then be that in the cases studied operative and unoperated cases have presented practically the same degree of permanent disability.

Our general personal opinion is that it is unwise for surgeons to have any set rule for or against operation in the type of injury under discussion. Each case presents its own individual problems and these should be solved as accurately as possible before the decision is made as to whether operation or conservative treatment is indicated.

350 Post Street.

#### DISCUSSION

MAYNARD C. HARDING, M. D. (700 Electric Building, San Diego).—It is of the utmost importance that the immense experience of the Commission and of the large insurance companies be made available to the medical profession by such studies as have just been presented.

I wish to ask the speaker whether these cases were operated upon early, or were they operated after conservative treatment had failed to give the expected relief?

✽

H. W. CHAPPEL, M. D. (1136 West Sixth Street, Los Angeles).—Doctor Harbaugh's report shows a great economic loss, both to the insurance companies and to the injured man, that does not exist with similar injuries to private patients. For financial reasons there seems to be a psychologic element in the industrial case which is not present in the private case. The latter patient is always anxious to get well, while the industrial patient seems to prefer to have his disability drag on as long as possible. Although many private patients are not obliged to return to heavy labor, some are, and are now doing the hardest kind of work.

The psychologic element is not the only handicap in the industrial case. Early diagnosis is very important. There is a wide difference of opinion as to the type of treatment most advisable for crushing fractures of the vertebrae. Doctor Harbaugh's figures have shown that there is practically the same degree of disability of the operated and of the nonoperated cases. He gives an average rating higher than 45 per cent, after thirty to fifty-two months had elapsed since the injury, compared with private patients who return to work in from three to twelve months, usually with no disability.

I have found the following method most satisfactory: recumbency on a straight or slightly curved

Bradford frame for two months, with frequent lower extremity exercises, and voluntary turning of the patient to prone position. It hastens healing, prevents the formation of adhesions, and gives the patient assurance that the back is getting strong and well. No weight bearing for about two months, then a back brace for at least six months. Three months after the injury, carefully directed gymnasium work should be commenced, and continued until a full painless range of body movements has been obtained.

How few doctors do this, and how frequently the rigidly immobilized, or fused spine becomes stiff, weak and painful, with no effort to obtain a normal and painless range of body movement.

The vertebrae heal just as completely as the long bones and nearly as quickly, with plenty of fractional and slight mechanical irritation. The compression fracture of the industrial patient should heal just as quickly and just as completely as in the private patient, who rarely has any disability twelve months after the injury. Most of them return to work in less than six months and some of them in three months.

If many of the industrial surgeons would change their treatment of compression fractures of the back, or refer the case to those who are constantly treating such conditions, the prognosis would not only be much better, but there would be a decided improvement of the psychologic element which has always been so discouraging to the surgeon.

✽

FREDERICK H. RODENBAUGH, M. D. (323 Medico-Dental Building, San Francisco).—With reference to Doctor Harbaugh's interesting presentation:

From the standpoint of the roentgenologist, the question of accurate early diagnosis of the exact nature of the injury is most important. The number of these injuries is increasing and it is now possible, with modern technique, to demonstrate varieties of lesions which in the past, when present, were not recognized.

In our experience, the necessity for a more complete study of the spine has been called to our attention by the increasing number of small injuries which are demonstrable with present technique but which formerly were not recognized.

To cite particular instances: Fractures of the lamina and articular facets are not rare with improved technique and increased experience in the interpretation of these lesions.

I have been much impressed with the number of these cases and results and feel that in many instances with early complete studies of the type and extent of injury, that the course of treatment may have been changed and the end results improved.

✽

DOCTOR HARBAUGH (Closing).—I am unable to give an accurate answer to Doctor Harding in reply to his inquiry as to whether the patients cited were operated upon early or after conservative treatment had failed. I believe that the patients were about equally divided, about half of them being operated upon a short time after the original injury.

I am very much interested in the remarks of Doctor Chappel in regard to the relative subsequent disability in industrial cases and in private patients. We read often in the literatures of these comparisons. Personally my own experience has been that there is not such a great difference as the various writers claim. I do not believe that the psychologic element and the hope for compensation is a major factor in prolonging the disability in the average case of this type. It may be a factor, but I think it is entirely a minor factor. These men have disability because they must of necessity return to heavy manual labor. I believe that if the average private patient had to do this same type of work he would have about the same proportion of disability as the average workman has.



## OBSTETRICAL ANALGESIA\*

By HARRY S. FIST, M. D.  
Los Angeles

DISCUSSION by P. Brooke Bland, M. D., Philadelphia;  
E. M. Lazard, M. D., Los Angeles; Lyman H. Robison,  
M. D., Los Angeles.

PHYSICIANS have sought for many years means wherewith they might lessen the suffering of labor, but no universally satisfactory drug or combination of drugs has yet been found.

No one method is applicable to every case. Often when one drug is contraindicated another may be given with safety if proper precautions are taken. None of the analgesics now in general use should be given in the average home confinement. The patient must be in a maternity institution of moderate size with ample nursing and medical staff; under the supervision of a trained obstetrician. Any simplification of technique, or decrease of risk to mother or child, would therefore be welcomed.

## THE STAGES OF LABOR

Proper administration of the analgesia of labor requires a consideration of the mechanism.

The first stage is one of dilatation and canalization. The upper uterine segment contracts, pulling the lower uterine segment around the presenting part. At this time no voluntary expulsive effort is necessary, but analgesia must not interfere with uterine contractions.

The second stage is the stage of expulsion. During this stage, contractions of the uterus and the accessory muscles cause the presenting part to descend and flex so that rotation may follow and labor continue. Prolonged labor, the result of poor contractions of uterus or accessory muscles, tends to cause exhaustion and resulting postpartum hemorrhage. It prolongs birth pressure, thus endangering the child. Analgesia, therefore, must not interfere with voluntary efforts during the second stage, or decrease strength or frequency of uterine contractions. Surgical interference must be feasible at any time, if indicated, so that labor may be terminated. The child must breathe; analgesia should not cause apnea or asphyxiation.

In the third stage the secundines are expelled. Failure to conserve the strength during the first or second stage may cause relaxation and postpartum hemorrhage in the third. Lacerations of cervix and perineum should be repaired at once. The mother should be in the best possible condition for a favorable puerperium. She must not be exhausted. The rectum and colon should not be injured.

## ANALGESICS IN LABOR

Among the analgesics now employed are: ether, chloroform, nitrous oxid-oxygen, morphin, morphin-scopolamin, and the so-called synergistic analgesia. Some work has been done on the use of hypnotism, lumbar spinal injections,<sup>1</sup> and also injections of local anesthetics into the cervix.

Rucker<sup>2</sup> reports that, in the order given, the following drugs lessen uterine contractions; paraldehyd, magnesium sulphate, morphin, bromids, chloral. General anesthetics in the order of uterine power inhibition are: chloroform, ether, nitrous oxid-oxygen and ethylene.

*Chloroform-Ether.*—Chloroform, properly administered, is a fairly safe anesthetic for the perineal stage of labor. Ether is much safer, for it is a stimulant instead of a depressant. Although its action is slower, the margin of safety is greater, and it affords warning signs long before danger of fatality develops.

*Nitrous Oxid-Oxygen-Ethylene.*—Nitrous oxid-oxygen is comparatively free from danger, and, except for the expense, is an excellent anesthetic, especially for the perineal stage. Ether may be combined with it for forceps, repair, etc. Nitrous oxid is reported<sup>3</sup> as prolonging the average bleeding time at birth one minute, and increasing the coagulation time two minutes. Ethylene increased bleeding time at birth two minutes, and coagulation time by three minutes.

*Twilight Sleep.*—Twilight sleep was first used in 1902 by Steinbrickel.<sup>4</sup> Morphin and scopolamin are the active drugs employed. This combination is now often used by the surgeon and nose and throat specialist, preliminary to local operation, but is not in great favor with the obstetrician, partly because of newspaper notoriety, and partly because it has caused prolonged labors, delayed rotation, unmanageable patients, apneic babies, and postpartum hemorrhage. Pain is not always relieved and labor must often be terminated by the use of forceps. This method requires special hospital care, absolute quiet, and many hours of attendance by the physician.

A twilight sleep patient is not amenable to suggestions. She may be restless on the delivery table and thus unsterilize the drapes. Leg holders must be provided, and the wrists fastened to the head of the bed. Thirty to forty-five minutes must elapse before relief is experienced; gas may be used temporarily. It is, however, possible to apply forceps, iron out the perineum, and repair without further anesthesia.

*Gwathmey Method.*—At present the morphin, magnesium sulphate, colonic-ether-oil method, advocated by Gwathmey, enjoys great popularity. It is a much discussed method; some users being enthusiastic, while others<sup>5</sup> (possibly including many who do not observe the proper technique) condemn it just as emphatically. It requires careful watching of the patient and judgment in dosage of drugs and time of administration. Good analgesia is often obtained, but there is an occasional apneic child, and always more or less irritation of the rectum and sigmoid. Labor is prolonged, and must, in many cases, be terminated by episiotomy and forceps.

Six drugs are employed for this method: morphin, magnesium sulphate, ether, quinin hydrobromate, alcohol, and olive oil.

\* Read before the Obstetrical Section of the Los Angeles County Medical Association, March 12, 1929.



Rectal ether anesthesia was suggested by Roux<sup>6</sup> in 1847. Its use was abandoned shortly afterward.

Wade in 1919<sup>7</sup> reported intestinal paralysis following rectal administration of ether.

Zalka in 1924<sup>8</sup> reported two autopsies after rectal narcosis which showed proctitis and great intestinal irritation. Rectal anesthesia is not under control as is inhalation anesthesia, for the amount of absorption cannot be so readily regulated. There is some irritation of the intestine in every case, a certain small number showing severe and even fatal irritation with hemorrhage. The physician who tests the possibilities for irritation of mucous membranes by attempting to hold in his mouth some of the ether-oil mixture, will be somewhat cautious in administering such a combination.

Because of the tendency of ether or morphin to arrest uterine contractions, the quinin salt is included in the rectal injection as a stimulant. Frequently labor must be terminated by episiotomy and forceps. Olive oil is used as a vehicle to lessen the irritation.

*Morphin.*—The chief source of danger seems to be the morphin. Hatcher,<sup>9</sup> in a masterful review of obstetrical analgesia, states that morphin in doses over one-sixth grain, and followed by ether or chloroform, involves danger to the child, which rises as the dose of morphin increases. One-fourth grain or more of morphin is used by Gwathmey. When administered within one or two hours of delivery, there is grave danger of apnea or asphyxiation. Pantopon<sup>10</sup> also depresses the respiration, although to a lesser extent than morphin.

*Magnesium Sulphate.*—Magnesium sulphate has long been known as an analgesic and sedative. Its use in eclampsia, described by Lazard,<sup>11</sup> has been very successful. In the dosage here used (two cubic centimeters of 50 per cent solution) it is harmless. According to Gwathmey,<sup>12</sup> morphin and magnesium sulphate are synergistic. Beckman<sup>13</sup> states that there is no synergism between morphin and magnesium sulphate, and that the combination is more toxic than either drug used alone. This is denied by Gwathmey. In any event, the administration of morphin to the parturient woman endangers the child more or less.

*Scopolamin.*—Experiments conducted in 1915 at the Washington University Medical School,<sup>14</sup> "demonstrated that scopolamin in doses much larger than were ever recommended for twilight sleep, has no material effect on blood pressure or on respiration." For some cases the above clinic uses scopolamin supplemented by nitrous oxid inhalations.

Bertha Van Hoosen,<sup>15</sup> states that she first reduced the amount of morphin given to this type of patient to one-sixteenth grain, and now uses none, relying on scopolamin alone. Her statistics show excellent results; no asphyxia and very slight blood loss. The scopolamin induces analgesia with increased muscle tone, and relaxes the sphincters. The patients must be watched closely,

and are kept with hands fastened above the head during delivery because of danger of contamination of the sterile field. The scopolamin method may also be used for minor obstetric operations.

Doctor Van Hoosen<sup>16</sup> reviews 2023 deliveries which show excellent results with scopolamin as the analgesic. At the onset of active labor, 1/100 grain is given every half hour for two or three doses as needed, then 1/100 grain every two hours as needed. Since the morphin seems to be the objectionable ingredient of both the twilight sleep and Gwathmey treatments, its substitution by scopolamin and magnesium sulphate seems very logical.

#### AUTHOR'S METHOD

According to Beckman,<sup>17</sup> magnesium sulphate and scopolamin really prove synergistic. Isselkutz<sup>18</sup> concludes that when magnesium sulphate is combined with scopolamin there is a true potentiation of the action. These two drugs, then, should induce satisfactory obstetrical analgesia.

During the past four years, in private practice and in a small series of cases delivered by students at the College of Medical Evangelists, the author has produced very satisfactory analgesia with a combination of magnesium sulphate and scopolamin. When the cervix has dilated to two centimeters and pains are strong, occurring at five-minute intervals or less, magnesium sulphate, two cubic centimeters of 50 per cent solution, and scopolamin, grain 1/200, are injected intramuscularly. The magnesium sulphate is repeated every half hour until pain is relieved, and the scopolamin is repeated every hour, if necessary, to obtain relief. In about twenty minutes the patient becomes drowsy. She dozes off between pains, but awakens during contractions. The scene changes from a very noisy to a quiet, calm one. No decrease in strength or frequency of contractions is evident. The pain factor is eliminated and the sphincters seem to relax better. The patient is tractable and fully able to cooperate during the second stage. She may complain during contractions, and on the following day describe the delivery as a not unpleasant dream, during which she felt more or less like a detached onlooker. The child is not born apneic. There is no increased tendency to postpartum hemorrhage. Nitrous oxid or ether may be given for surgery or during the perineal stage.

This method does not increase the danger, but every patient must be carefully watched throughout any labor, whether or not any analgesic be used. Pain is not entirely eliminated, but is greatly decreased. The use of inhalation anesthesia is not contraindicated.

The variability in the scopolamins on the market has been a great cause of failure in the administration of twilight sleep. The ampoules prepared by Roche have proved stable and dependable. The patients have not been restless or obstreperous. Whether or not this quiet and calm is due to synergism between scopolamin and magnesium sulphate, we are not prepared to state. The question of synergism is a debatable one and



will bear further investigation, but the combination has proved so satisfactory that its further trial is justified.

#### SUMMARY

Morphin has proved unsatisfactory as an analgesic during labor.

Scopolamin, given alone, relieves suffering and does not endanger mother or child, but sometimes causes restlessness, thus interfering with proper asepsis.

Use of magnesium sulphate with scopolamin eliminates the restlessness and provides a simple, safe, efficient obstetrical analgesia.

1930 Wilshire Boulevard.

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#### DISCUSSION

P. BROOKE BLAND, M. D. (1621 Spruce Street, Philadelphia).—There are so many problems involved in this question that it is absolutely impossible for me to express in a few words my feeling regarding the administration of anesthetics in labor.

No one will deny the benefits of anesthesia, properly administered, to women during confinement.

It is my custom to advocate and practice analgesia or anesthesia of some sort in every case of labor. I would no more think of allowing a woman to pass through the throes of confinement without an anesthetic than I would think of doing a hysterectomy, for example, without anesthesia.

It is almost inconceivable that we were at one time taught that anesthetics were not indicated and that they should not be used in maternity practice. Why

women have been made to bear the intolerable suffering of childbirth, I have never been able to understand.

In recent years efforts have been made to discover or develop some form of obstetrical anesthesia that one could look upon as more or less ideal, but thus far the ideal agent has not been discovered.

A separate and distinct anesthetic is not applicable to all obstetric patients. It is my habit in both primigravida and multigravida to administer morphin with hyoscin or scopolamin in the very discomforting period of the second stage. This is not given to any patient, if the conclusion of the second stage is imminent.

We refrain from giving morphin at this time, because we routinely employ some form of inhalation anesthesia—and almost invariably ether—just as the completion of the second stage takes place. Morphin administered within an hour or two before the birth of the baby, as Doctor Fist has properly pointed out, has a decided deleterious effect on the child, so much so, that resuscitation is sometimes difficult and occasionally may result in fetal death.

In primigravida the method of Gwathmey or rectal analgesia appeals to me, and is employed quite regularly in my department as well as in my private practice. We have not observed any serious untoward effect from its use either in the mother or her offspring. For the best results it must obviously be carried out in strict accordance with the directions laid down by its originator.

Recently we have used in our ward service spinal analgesia in certain cases of operative delivery with a view of determining its true value. I am quite convinced that it fills a niche in some instances, though I believe that its scope of usefulness is more or less limited.

Chloroform I seldom, if ever, use, although I have great respect for it as an obstetric anesthetic if properly and wisely administered.

Twilight sleep in modified form, such as suggested by Doctor Fist, is probably employed more or less unconsciously by most accoucheurs.

I would hesitate, however, to administer a 50 per cent solution of magnesium sulphate in two cubic centimeter doses every half hour, nor could I be persuaded to hypodermically administer scopolamin in doses of grain 1/200 every hour, "if necessary to obtain relief," as advocated by the essayist.

I, however, have not had wide experience in administering the combination of magnesium sulphate and scopolamin in accordance with the plan advised by Doctor Fist and, therefore, I am not qualified to express an intelligent opinion as to its usefulness.

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E. M. LAZARD, M. D. (311 Wilshire Medical Building, Los Angeles).—The relief of pain in labor is a subject which is always of the greatest interest to the obstetrician. Doctor Fist's review of the methods of analgesia that have been used, as well as the method which he describes, must therefore engage our serious attention. In our endeavors to attain a "painless childbirth" we must keep in mind that any such method, to be successful, must not carry any additional danger to mother or child, must not interfere with the progress of labor, and must be reasonably easy to carry out.

The method described by Doctor Fist would seem to be simple, and one would expect to get good results from the combination of scopolamin and magnesium sulphate. I have not had sufficient experience with the method as yet to be able to arrive at any conclusion as to its value. I believe, however, that any such method should be limited to the first stage of labor. Doctor Fist recommends "two cubic centimeters of a 50 per cent solution of magnesium sulphate every half hour until pain is relieved." He does not state any maximum number of doses which he has found it necessary to administer. Criticism might be made of this advice because of the possibility of getting toxic effects if too many such doses were



given. In our work at the Los Angeles General Hospital with the eclamptic toxemias, we have used as much as 22 grams, intravenously, in twelve hours without any evident ill effects. Assuming that not more than three or four doses of two cubic centimeters of 50 per cent solution, intramuscularly, would be necessary in any case, I believe that one would be well within the limits of safety and need not fear any ill effects.

For the second stage, I personally prefer nitrous oxid analgesia. In our endeavors to obtain a good analgesia, we must not overlook the fact that a most important factor in securing a "painless labor," is the early recognition and correction of any malpositions or malpresentations; for we must not allow too long a second stage in the hope of having such abnormalities spontaneously corrected.

✽

LYMAN H. ROBISON, M.D. (222 Westlake Professional Building, Los Angeles).—Obstetrical analgesia is a subject receiving considerable attention and discussion, not only by obstetricians, but by the laity as well, and more and more are women demanding a "painless childbirth" from their physicians. As a result the obstetrician frequently has a difficult course to pursue in attempting to accede to the patient's requests and yet keep clear of the dangers and complications of the several methods of analgesia now in use. On the other hand, the woman in labor is entirely right in expecting an effort at the relief of pain and, with our present knowledge of analgesia, we are not giving her the protection to which she is entitled if some pain-relieving procedure is not employed.

With Doctor Fist, I feel that morphin in labor is not free from danger to the child and that it should never be used late in labor. Even when used early and followed by an inhalation anesthesia, one not infrequently finds some difficulty in resuscitating the infant. If the morphin could be replaced with some efficient preparation free from the untoward effects of the narcotic, it would add materially to the safety of an analgesic method in obstetrics.

The suggestion made by Doctor Fist of combining scopolamin and magnesium sulphate interests me. It appears to be a simple procedure and, while I have had no personal experience with the method, the combination should enable one to obtain good results. The only drawback that I see to the method is the rather uncertain action of the scopolamin when used alone, not infrequently acting as a cerebral excitant rather than a hypnotic. If, as Doctor Fist claims, the presence of the magnesium sulphate prevents this untoward action, it appears to me to be a procedure well worth while in inducing analgesia during labor.

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DOCTOR FIST (Closing).—The interest in obstetrical analgesia, as evidenced by the discussions of Doctors Bland, Lazard, and Robison, indicates the attitude of present-day obstetricians. Relief of pain during childbirth is no longer considered unnecessary. The method under discussion is presented because of its simplicity, safety and effectiveness.

Elimination of the use of morphin seems highly desirable. Magnesium sulphate and scopolamin in the dosage employed have proved to be well within the safety limits. The average patient will not require, at the outside, more than three doses of scopolamin grain 1/200, nor more than five doses of magnesium sulphate, two cubic centimeters, of a 50 per cent solution.

Van Hoosen administers scopolamin, grain 1/100, every half hour as needed, without any ill effects. Lazard gives as much as 22 grams of magnesium sulphate, intravenously, in twelve hours. Lee Dorsett (*American Journal of Obstetrics*, February 1926, p. 227) gives as much as 100 cubic centimeters of magnesium sulphate, 25 per cent solution, intramuscularly, in twenty hours. Our average dosage is 4 to 5 grams, intramuscularly, during the course of the labor. Care must be taken to inject the magnesium sulphate deeply into the muscles to avoid abscess and slough.

## CHILDHOOD TUBERCULOSIS—ITS TREATMENT\*

### REPORT OF CASES

By CHARLES L. IANNÈ, M.D.  
San Jose

DISCUSSION by Charles P. Durney, M.D., San Jose; Chesley Bush, M.D., Livermore; Ann Martin, M.D., Oakland.

THE problems met in treating a chronic disease such as tuberculosis in childhood are of two distinct natures. They are problems of the mind and of the body. The aim of the physician of a child so afflicted must be to produce a mentally and physically well adult.

### PLACE OF PARENTS IN TREATMENT

As the treatment of disease begins with the diagnosis, and as the child can only be treated through a third person—the parent—the manner in which the diagnosis is received will have a direct bearing upon the course of the disease, and the future welfare of the child. J. A. Meyers,<sup>1</sup> in a recent paper, states that there are three main types of reactors: the first, the mother who feels the diagnosis is impossible, as tuberculosis has not been in the family before; the second, who becomes hysterical, as she considers all forms of tuberculosis fatal; and the third, who is relieved to know that at last a diagnosis has been arrived at and that with the proper institution of treatment, good opportunity for recovery is assured.

A good type of the hysterical mother consulted me concerning her child of ten years. The history showed that the child had been subject to frequent colds and headaches. He recently had had scarlet fever with a complicating nephritis. A tonsillectomy had been performed because of continuation of fever. A change of doctors then occurred, as the child did not improve immediately. The second physician on finding "moisture" in the chest ordered an x-ray. On the subsequent visit the diagnosis of hilum gland tuberculosis was given the parent, together with indefinite unwritten instructions to give the child rest, plenty of food, fresh air, and sun baths. I gathered that she believed her child to be threatened by death. She placed him on twenty-four hours bed rest regimen without lavatory privileges; put him on a high caloric diet; began a rigorous course of sun baths with the initial dose of fifteen minutes to complete body; and took frequent temperature readings.

On examination the child was found to weigh one hundred pounds, thirty-two pounds over the average for age and height; lungs and heart were negative; purulent secretion was present in the nasopharynx.

The x-ray was consistent but not conclusive of hilum gland tuberculosis.

The mother was assured that the child did not have a fatal form of tuberculosis and that the rigid regimen should be modified. She was told

\* Read before the Pediatric Section of the California Medical Association at the fifty-eighth annual session, Coronado, May 6-9, 1929.



her morbid fear and anxiety was detrimental to her child, who was precocious and delighted in helping in the recitation of his symptoms. A recent letter from the mother states that she is following my advice and that both the child and herself were much happier.

I felt that in this case the doctor was at fault in the manner in which the diagnosis was presented. A written program of the prescribed hours of rest, sun baths and nourishment should have been given, as one would do in prescribing drugs. At the same time it should have been explained that many conditions have the same group of symptoms and that only a tentative diagnosis could be arrived at for the present.

We do not doubt that the finding of calcified glands in the hilum may have indicated the presence of a tuberculous infection, but the disease from which the child was suffering was apparently a chronic nasal infection with recent bronchitis. At Del Valle Preventorium, at which institution I was on the staff for four years, Bush found that from 10 to 25 per cent of contacts who were admitted had other foci of infection besides their tuberculosis to account for their present symptoms.

From a purely medical viewpoint the problems are as varied as are the manifestations of tuberculosis. The infantile and adult form of pulmonary disease, the lymphatic and bone manifestations, each present problems entirely alien to the other. They are similar only in that rest and hygienic measures are common in the treatment of all types.

The treatment of the infantile and the adult types of pulmonary disease, because of their gravity at this age, have to my mind only one correct method of treatment, that is, the removal of the child to a hospital or sanatorium where the strictest regimen can be pursued. The lesions at this time are of the preponderately exudative form, and are usually bilateral and progressive. Armand DeLille<sup>2</sup> has treated many children by induction of artificial pneumothorax, but a report of his results is inconclusive, for his cases were apparently still under treatment. He feels that because of the high mortality, that this type of interference is indicated. At best, interference is palliative in the majority so afflicted.

#### TUBERCULOSIS OF BONES AND JOINTS

The next form of tuberculosis to be considered is that affecting the bones and joints. Since Rollier startled the medical and lay world by his conservative nonsurgical method of combined sun exposures and fixation apparatus, physiotherapists have tried his methods with indifferent results. A few men, such as Gauvain of England and Lo Grasso and Hyde of the United States, have reported good results from these methods. The majority have called in orthopedists, who tempered the medical treatment with conservative surgical procedures. In the place of bone curettements, extra-articular fixation bone graft operations with correction of deformities are now

resorted to. By the fixation of the joint the additional local rest to the part is insured, and healing takes place more rapidly, safely, and securely. The danger in surgical treatment is the false security that may result from the immediate operative results, for we must not lose sight of the fact that the local disease is only one manifestation of a general disease, and that rest and other measures are necessary for several months until all symptoms of activity have subsided.

#### TUBERCULOSIS OF LYMPH GLANDS

Perhaps the most difficult form of tuberculosis to treat and the type that gives the practitioner more worry because of its indefinite diagnosis and symptomatology, is tuberculosis of the lymph glandular system. The problems are many. It is a fairly simple procedure to treat a sick child during the course of an acute illness; but to treat an apparently well child who has a basic chronic infection will tax the ingenuity of the physician and the patience of the parent.

Because of the chronicity of the disease, and need for institutional treatment during the formative years of childhood, inferiority complexes may be set up that will hamper future initiative.

Before going into the procedure used in treating this form of the disease, two cases, illustrating the inefficacy of treating tuberculous glands by local measures only, will be presented.

#### REPORT OF CASES

CASE 1.—A husky boy of ten came under my observation. The only appearance of general toxemia was a slight pallor, dark circles under the eyes, and an irregular low-grade fever. He had been treated at a San Francisco hospital for enlarged cervical glands during the preceding year. First a tonsillectomy, followed by a course of x-ray treatment; then an attempt at a radical bilateral gland dissection was done. His neck and face were frightfully scarred by large keloids that continued to suppurate. A few weeks preceding admission to the sanatorium the posterior cervical glands began to enlarge and one abscess was incised. Investigation showed that no attempt at rest regimen had been advised or attempted. After a few months of sanatorium rest the enlarged glands subsided, the suppuration of scars ceased and the general condition was markedly improved.

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CASE 2.—Another child had had a lupus of the dorsum of the foot of six years' standing and multiple sinuses of the neck following bilateral dissection. Upon being placed on a strict rest regimen with removal of dressings, thus exposing the neck to the air and sunlight, the wounds showed immediate improvement. A complete healing of lesion of the foot occurred in a few months.

#### COMMENT

The proper care for this type of child in the home consists in finding the causes for the substandard condition and eliminating them. Inadequate diet, focal infection, systemic diseases, and insufficient rest are found to be the chief factors that undermine the resistance against tuberculosis.

Inadequate diet may be due to poor budgeting or ignorance of dietary principles. Through education of parents, as is being done at the Oakland Health Center, with the coöperation of the adult educational department,<sup>3</sup> this problem becomes a



simpler procedure. The elimination of focal infections is taken care of through frequent surveys in both the preschool and school clinics. Systemic diseases are being made less dangerous through conferring of artificial immunity, as for diphtheria, smallpox, and scarlet fever. The most difficult factor to apply in the home treatment is *rest*.

As a preliminary to the application of rest in the home, a careful survey of the child's daily activities is necessary.

CASE 3.—A case illustrating this point is that of a 16-year old high school girl exposed to a tuberculous mother since birth. One year previous, because of the presence of fever notwithstanding a negatively read x-ray plate, the child was put on a short rest period which was taken rather indifferently. A careful history of her daily activities elicited the following:

She arose at 6 a. m. to study for one hour before breakfast. Breakfast at 7 a. m.; 7:15 to 8 more study; in school from 8 to 12 noon. Then followed a sandwich lunch without milk or hot soup, accompanied by further study. In the afternoon, gymnasium and school until 3:30 o'clock; home at 4 o'clock; studied organ lessons until 5:30 o'clock. Supper, and then more study from 7:30 to 9:30 p. m. or until she fell asleep over her books.

The above would be a big day for an adult, let alone a girl in whom the following symptoms were noted: nineteen pounds underweight; lymphatic gland enlargement, necessitating removal of one gland in the previous year; cessation of menses; repeated colds and fever 99.2 to 99.4 F. She cried frequently and was emotionally upset, as her school work was not so good as formerly.

The physical examination revealed a few fine inconstant râles at right apex; second x-ray showed a calcified primary focus under right clavicle. In retrospect, the first x-ray showed a slight haze in this area.

The following changes were made in her schedule:

The child was to rise at 7 a. m. instead of at 6 a. m., eliminating morning studies. One subject and gymnasium were dropped, and a two-hour rest period was substituted at school. Study after supper, and to bed at 8 p. m. After one month her menses returned, she began to put on weight, nervousness and hyperemotionalism disappeared.

#### REST AND OTHER REGIMEN

As was stated before, the application of rest in the home is not an easy matter. Explicit orders should be given as to the time, amount and place where the child should be put to rest. One must stipulate that the child be clothed as for bed, because psychologically he will respond to sleep more readily. It is difficult to get the child's cooperation, as rest is uninteresting for the active mind, and he cannot see the why of rest when all persons about him are active.

If rest at home is impossible, it may be given as a "rest gym" at school. Those children who do not respond to this modified home-school rest program should be referred to a preventorium.

In the preventorium, children are protected from repeated systemic diseases by a two weeks' isolation of the new child, and prohibition of child visitors. Rest is easily applied, as he is admitted into a group that is already disciplined. He soon finds that he must eat the foods that he refused at home. His play and school hours are allotted as he is able to tolerate them. He is also given short sun and air baths as a tonic to

metabolism. The child is soon transformed into a picture of health, rarely seen in an ordinary school group.

But this is only a start on the road to health. As Trimble<sup>4</sup> puts it, "the parent is liable to think that an institution is a place to get perfectly well and leave all troubles behind." This is far from the truth. The factors at home which originally produced the subnormal condition will, in a short time, undo all the good done by the stay at the preventorium.

#### SOME PREVENTORIUM OBSERVATIONS

In a preliminary report by the author<sup>5</sup> of a survey made by the Oakland Health Center of one hundred children who had been discharged from Del Valle Preventorium, about 40 per cent were found to be underweight. A later and more complete report by Bush and Shepard,<sup>6</sup> showed the following: Of 120 discharged Oakland children 107 were accounted for, and of this group, fifty-eight were underweight; only fourteen of this number having been discharged below normal weight. In the Berkeley group of forty patients, nine were readmitted to the preventorium, ten were awaiting readmission, seventeen failed to improve, and four showed steady improvement. This is certainly a discouraging situation.

Several factors account for the inability of this type of child to get the additional rest that is necessary to keep him fit. Parental ignorance with lack of understanding of what constitutes proper health, thus failing to see the need for the application of the efforts required, accounts for some failures. Secondly, there is poverty, requiring that both parents be at work, putting the responsibility of taking the rest period on the child himself. Thirdly, there is a group who try to apply the rest ordered, but because of the difficulty of getting the child's cooperation, finally give up in despair.

To readmit these children in a preventorium is only wasted effort, for on discharge the same picture is enacted. This may be done repeatedly until the child has passed puberty, but the discipline of an institution may insure a healthy body at the expense of a proper mental outlook on life. The gap between the sheltered life of a preventorium and home seems too great.

#### HOW THE SCHOOL MAY AID

The home having failed, the school may then be called upon. Group discipline and established organization make it possible for the school in this way to give to the child what is his inherent right, the right to grow in mental and physical development. This may sound a bit paternalistic, but so is the public school. The school helps to regulate physical health through its gymnasium, calling it physical education. Rest, its counterpart, is just as much a part of physical education and, in all primary grades, should be a regular feature of the daily curriculum, following the noonday recess.

Until this utopian condition becomes a fact, the under par child at least should be taken care of



through the open window school,<sup>7</sup> as is done in Chicago, where in twenty-six schools there are fifty-six such rooms caring for 1680 children. In a recent report they find that of 1963 open window room children compared to a like number of the normal group, the open window group gained 3.6 pounds, as against 2.5 pounds of the latter.

To overcome the defect in the follow-up work in Berkeley, Shepard suggested that a centralized preventorium school be organized to take care of the ex-preventorium and other substandard children. The school program was modified to allow supervised play, rest periods, sun and air baths, and hot luncheon under direction of the school dietitian. Of seventy-nine children cared for, 73 per cent were benefited. Improvement of the ex-preventorium children was especially noted. A marked reduction in the waiting list of children for the preventorium occurred. Better grades resulted and a reduction in the percentage of absences from 18.7 to 9.2 per cent resulted.<sup>6</sup> Centralized preventorium schools of this type serve as centers for disseminating health education to the teachers and parents in the community.

Hayward has a nutrition class of this type; Oakland has recently started a preventorium school in the better and poorer sections. Once established, the need for more of this type of school is soon recognized.

#### SUMMARY

In conclusion, we wish to emphasize that *rest* and *time* are the chief factors in the cure and prevention of childhood tuberculosis. That the home and school are the places where these principles must be put into effect. That the preventorium should be resorted to only when these measures fail.

Sunnyholme Preventorium, Santa Clara County Hospital.

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#### DISCUSSION

CHARLES P. DURNEY, M. D. (San Jose).—I take it that Doctor Ianné, in treating this subject, stresses particularly the conduct of that type of case falling in the group which has brought about so much discussion and dissension mainly from the standpoint of diagnosis—the pretuberculous child, or the tuberculosis suspect, or, as it is sometimes termed, the contact.

We all recognize the type, that "under par" child in which there are suggestive signs but in which so

frequently we find a doubt as to the actual presence of active tuberculous lesions.

There is no question regarding the indicated regimen for a child definitely ill with clinically manifested tuberculosis in any of its forms. This type of case is primarily and emphatically an institutional charge and should be under the care of those who are trained and experienced in order that every phase of the child's condition may be under observation and study and every advantage offered to forward what usually are but the slimest of chances in this serious affliction.

Too much stress cannot be given two most important elements in this subject—*rest* and *time*. When we say of faith, hope, and charity that the greatest of these is charity, we can say of that trilogy—so much a part of the treatment of tuberculosis—fresh air, good food, and rest, that the greatest of these is *rest*. We should also add that *time* is a very marked essential. There are no short cuts to a cure.

I believe that we have, however, one of the most splendid examples of what can be done for these youngsters that we have in any department of medicine. It answers every question and needs only the same faithful application in a general way but on a greater scale, and it is demonstrated every day in our preventorium. If the National Tuberculosis Association has done nothing else, it has created something of which to be justly proud in the preventoria which have grown out of the idea conceived, nourished and materialized under its study and guidance. If any physician desires to know what is best to do for the type of child we are considering, let him visit a modern and up-to-date preventorium and receive its inspiration, and borrow its book of rules.

Regarding the under par school child, we are certainly coming to the fresh air school. And it is of interest to note the awarding of certain credits to students who are placed on rest periods. Our local junior colleges and the University of California are doing this. When they all fall in line, much good will follow, as a youngster will have an incentive which appeals. To gain a credit by lying down and relaxing for an hour will not be so much like punishment. Verily, this thing we have preached for so long a time, *rest*, is being accepted.



CHESLEY BUSH, M. D. (Arroyo Sanatorium, Livermore).—A large amount of work has been done in the past ten years by tuberculosis associations and others in "preventive" work among children. This work has been handicapped by lack of knowledge and difficulty of interpretation as to just what constitutes tuberculosis in a child. While the broad principles of prevention and care have undoubtedly been right, it is also true that a great deal of money and effort has been expended on groups of children who are economic and social problems rather than medical problems. Children have largely been chosen for treatment from the underweight groups. The careful studies of Opie and McPhedran and their associates have pointed out to us most forcibly that tubercle infection, and even the tubercle lesion, need not be in the underweight group; and therefore a revision in the plans of selection of children for preventorium and school care is about to take place.

We have had an interesting opportunity to study the development and regression of tuberculous lesions in the lungs of children from infancy up to adolescence. We have been impressed with the value of time in the treatment of juvenile tuberculosis just as in adult tuberculosis. Where juvenile infection exists reduction of physical strain on a child must be carried out for a period of years. It is obviously impossible to do this in a preventorium, it is possible but generally difficult and impractical to find parents who will carry on a protracted regimen at home in an apparently healthy child, and hence the problem falls back upon the school. A course of extra rest and nutrition becomes a part of the school schedule easily. And so we have ended just where we started—in the school. Tuberculosis prevention is a school problem because



selection and treatment can be carried on in the school except in a small percentage of cases where preventorium or sanatorium care will always be necessary to check a progressing lesion.

In the next decade a large part of the work we have been doing with children in clinics and preventoria will be accepted and carried on by school departments, just as routinely as the teaching of arithmetic. For this the present-day preventoria have pointed the way.

We have had an opportunity to observe a number of children who have been hospitalized for years because of extensive tuberculous lesions, and who have eventually recovered. The wreckage of their bodies was nothing compared to the wreckage of their minds, their character, and their entire viewpoint on life. For that reason I believe that the institutionalization of children should be avoided as a policy and every effort made to make a stay in an institution as short as possible. It is as important that a child be brought up in a normal environment as it is that he has a normal body. Our present-day preventoria are operated with this point in view, and furnish better homes for the children than those from which they come in most instances; but the health education gained there does not carry back into the homes with the younger group of children who quickly forget.

Children with extensive pulmonary lesions of the juvenile type do get well; it has been astonishing to us. But in order to achieve that end we need all our facilities—sanatorium, preventorium, and school care, in the order named. We must use all our facilities to the best advantage. With a better selection of children, a more extensive use of our schools in treatment, and a better selected group in our preventoria and sanatoria, we should be handling our problem with great efficiency.

✱

ANN MARTIN, M. D. (Baby Hospital, Oakland).—Time and rest are the two most important factors in the treatment of the child infected with tuberculosis. Whether this care should be given in a sanatorium, preventorium, the home, or the school, depends on the extent and character of the lesion found in the lungs, and upon the age of the child. There is no difference of opinion that sanatorium care is desirable for the acutely ill child, though here, after a time, the child will do better, both mentally and physically, and progress faster if removed from the sanatorium for home or school care.

In a series of fifty children with pulmonary infiltrations, seen by me at the Baby Hospital contact clinic, thirty-five were under six years of age when first seen. This high proportion of pulmonary infiltrations (which are potentially the most serious lesions) in the preschool child means that home, and not school care, must supplement sanatorium treatment.

Our problem here is to work out a satisfactory routine which the busy mother can carry out at home. In my experience this can be done successfully in most cases if detailed supervision is maintained over a fairly long time by the doctor and visiting nurse. Most mothers are unwilling to send their young children to an institution unless the effort to care for them at home has failed to give results. Home care requires, first, coöperative parents; second, a continuous sympathetic supervision of the child by the doctor. Explicit directions as to rest, activity, and diet are essential. Periodic visits to the doctor and home visits by the visiting nurse, inspire the mother with a feeling of confidence, helpfulness, and hopefulness, and gives her the incentive to maintain the prescribed routine through the many months necessary to secure a cure in the child.

Frequent x-ray pictures must be taken, as only through serial pictures can we follow the progress of the lesion; these findings are a definite guide in treatment. The frequent taking of x-ray pictures also gives the parents a feeling of confidence and again definitely helps them to maintain the routine.

I feel a word of warning should be sounded here against the too frequent acceptance of weight as the sole measure of a child's physical fitness and health. Lack of fatigability and irritability, improvement in the child's school progress, are valuable criteria of the child's progress in his return to normal health.

Another point probably of first importance in the treatment of the tuberculous child is to break his contact with the source of his infection. The extent of the disease and the prognosis depend upon avoiding repeated inoculations with the tubercle bacilli. In the words of McPhedran, "Experience suggests that the determining factor (in the cure of tuberculosis) even after consolidation is extensive, is complete termination of exposure to the infecting source."

✱

DOCTOR IANNÈ (Closing).—As Doctor Durney presumed, I particularly wish to stress in this paper the problem of diagnosis and care of the substandard or pretuberculous child. The stigma which formerly rested on rest as a part of health education is being broken down, as witness the giving of credits for rest by high schools and colleges.

I realize that weight is not the sole or major criterion for selection of the substandard child. It is nevertheless a good index by which to select and study the greater portion of substandard cases. Then with finer details as to history, observation and special examinations, such as the tuberculin test and chest x-ray graphs, only a few children will be overlooked.

Doctor Bush mentions the impracticability of finding parents who will carry on a protracted rest regimen in children who are apparently well. This care, then, devolves upon the state through the school.

President Hoover, in calling the 1930 Conference on Child Welfare, sounded the correct chord when he stated: "It is not the purpose of such efforts to invade or relieve the responsibilities of parents, but to advance those activities in care and protection of children who are beyond the control of the individual parents."

## HUMAN TORULA INFECTIONS—A REVIEW\*

### REPORT OF CASES

By HOWARD A. BALL, M. D.  
Los Angeles

DISCUSSION by Newton Evans, M. D., Los Angeles;  
Willard J. Stone, M. D., Pasadena.

### DEFINITION AND CLASSIFICATION

TORULA infections are those infections involving chiefly the central nervous system and lungs, caused by yeast-like organisms, belonging to the group of *Fungi imperfecti*. Prominent features have been transparent capsules, as seen in tissues and to a less degree in cultures, and in cultures reproduction primarily by budding. Striking clinical features are the absence of bone lesions and the extreme rarity of skin lesions, one case being reported in which one skin lesion occurred when the disease was disseminated. The classification given by Sheppe<sup>1</sup> is acceptable for the present.

Torula infection as a clinical entity is well established. The identity of the organisms in the cases reported is far from certain. A number of cases have been accepted without cultural data, the diagnosis having been based on the histological picture. The second of the cases here reported

\* Read before the Pathology and Bacteriology Section of the California Medical Association at the fifty-eighth annual session, Coronado, May 6-9, 1929.



is identical histologically with a number of the previously reported meningeal cases, but the cultural characteristics of the organism are at some variance.

These infections have been well classified by McGhee and Michelson<sup>2</sup> as systemic and local. By systemic is meant any involvement of a vital anatomical system. The central nervous system and the respiratory system are the ones chiefly concerned. Local cases are those in which a non-vital system or cavity is the site of involvement. Such cases have involved the muscular system, tongue, soft palate, and pelvic tissues.

#### CASES IN THE LITERATURE

In the years 1906 and 1907, two cases of so-called blastomycosis involving the central nervous system were reported by Von Hansemann and Turck, respectively, in Germany. In 1911 and 1912, Rusk<sup>3</sup> reported two similar cases. Then in 1916, Stoddard and Cutler<sup>4</sup> grouped these four cases as distinct from other reported blastomycoses and added two cases, comparing the lesions in theirs with those produced in animals by Frothingham's torula, obtained from myxomatous lesions in a horse, and established torula disease as a clinical entity. It is obvious that even subsequent to this some cases would still be reported, using the older nomenclature, and must be identified chiefly from the clinical and anatomical features in comparison with known cases, together with the cultural data when available. Reference to Chart 1 will show the cases in yearly chronological order of publication, the months of publication having been disregarded so that there are undoubtedly some errors in precedence for any one year.

The cases of Goto,<sup>5</sup> and Swift and Bull<sup>6</sup> were overlooked from their dates of publication until Wilhelmj brought them to notice in 1925 under the older terminology of blastomycotic meningitis. Goto used the same two German cases included as torula by Stoddard and Cutler, and considered his case identical with them. The case of Wilhelmj<sup>7</sup> is similar to that of Goto which he in turn uses for comparison. The case of Swift and Bull, as reported, is unmistakable, even a special staining technique for the demonstration of the capsules being propounded.

To date there are twenty-three systemic cases reported in the English literature, including three quoted cases from the German. The two cases here reported make twenty-five. Two additional cases to be reported are known to the author, making the number of cases twenty-seven. The local cases number four. Reference to Chart 2 will reveal several items of interest in these cases.

#### REPORT OF CASES

CASE 1.—This case occurred in 1922, but was never reported in the literature. Postmortem examination of head by Dr. George D. Maner.

*Clinical.*—The patient, a married white male of fifty-five years, cement worker by occupation, entered the hospital in a semi-comatose condition April 4, 1922. He had complained of headaches for a year, localized in the frontal regions and constant in character. He had had lumbar pain and a fever ranging from 99 to 101 for a three months' period, following which he improved under a physician's care for about six weeks, when the headache and backache returned, but not the fever. He now had difficulty in talking. He became gradually worse, and two weeks before admission lost the power of speech altogether, but was not unconscious. The only past history on record is "rheumatism" at sixteen years, and "dropsy" at seven years.

Examination revealed a semi-comatose, rigid, middle-aged white male, restive and uncoöperative. The right pupil was larger than the left, but both reacted well to light and accommodation.

The heart tones were weak, but there were no murmurs. The blood pressure was 90/60. The lungs expanded equally. There was slight impairment of resonance over the right upper lobe posteriorly, and breath sounds were indistinct in this area. No râles heard. Abdomen and genitalia negative.

Both arms and both legs were spastic and were held in a flexed position. There was some carphologia, especially when disturbed. The knee-jerks were hyperactive bilaterally. Biceps not obtainable. Babinski and ankle clonus negative.

A spinal puncture showed clear fluid under increased pressure. Tests for globulin and albumin were positive. There were ten cells per cubic millimeter. Blood findings: Red blood cells, 4,480,000; white blood cells, 6600 per cubic millimeter; polymorphonuclears, 68 per cent; eosinophils, 2 per cent; and mononuclears, 30 per cent. Another count nine days later was: Hemoglobin, 90 per cent (method?); red blood cells, 4,200,000; and white blood cells, 7200 per cubic millimeter. Two Wassermanns were negative, three weeks apart.

A neurological consultant stated that there were no signs of cranial nerve involvement. He was not

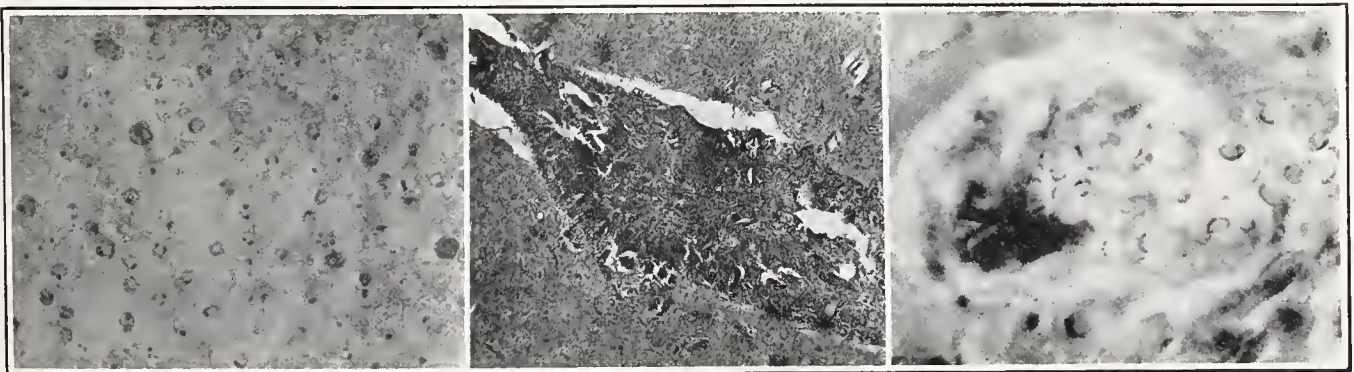


Fig. 1.—High power magnification of the organisms within the brain substance in Case 1. Gram-Weigert stain. Note absence of tissue reaction.

Fig. 2.—Low power magnification of a meningeal tubercle in a sulcus of the cerebrum, showing brain substance on either side (Case 2).

Fig. 3.—High power magnification of the organisms within a giant cell in the meninges (Case 2). Gram-Weigert stain.

CHART 1.—*The Systemic Cases of Torula Infection in Yearly Order of Publication*

No.	Observer	Year	Sex	Age	Extraction	Geographic Location	Complaints	Tentative Diagnosis	Diagnosis Established	White Count	Duration	Autopsy	Type Lesion C. N. System	Other Organs Involved
1	von Hansemann	1906	M	18	German	Germany	Apathy Nystagmus Slow pulse	Tuberculous Meningitis	Autopsy		¾ Mo.	Yes	Meninges Thalamus	
2	Turek	1907	F	43	German	Germany	Headache Vomiting Chills	Tuberculous Meningitis	Spinal fluid exam.	9,000 p-91%	1½ Mo.	Yes	Meninges	Esophageal musculature
3	Rusk	1911	F	63	German	New York	Confused Talkative	Insanity— committed	Autopsy		1 Mo.	Yes	Meninges Basal gang.	Left lung
4	Rusk	1912	M	57	German	New York	Confused Speech loss Hemiplegia	Committed Insane	Autopsy		24 Mo.	Yes	Meninges	Right lung Kidneys
5	Stodard and Cutler	1916	F	42	American	Florida	Headaches Diplopia Confusion	Internal hydrocephalus	Autopsy	10,000 to 34,000	3½ Mo.	Yes	Meninges Brain substance	
6	Stodard and Cutler	1916	M	39	American	Mass.	Headache Drowsiness Dizziness	Abscess or Glioma	Autopsy	9,100	3½ Mo.	Yes	Meninges Brain substance	Both lungs
7	Gotto	1916	M	61	Japanese	Japan	Headaches Diplopia		Spinal fluid exam.			Yes (head)	Meninges	
8	Swift & Bull	1917	M	53	Chinese	Australia	Headaches Failing vision		Spinal fluid exam.		1¾ Mo.	Yes	Meninges Dorsal Cord	
9	Pierson	1917	M	57	American	California	Apraxia	Senile dementia	Autopsy	7,600 to 15,600	1½ Mo.	Yes	Meninges	Sears l. lung bronchial gl.
10	Evans	1922	M	13	Mexican	Arizona	Headaches Adenopathy	Chronic meningitis	Spinal fluid exam.	7,200 p-65%	1¼ Mo.	No	Meninges plus ?	
11	Evans	1922	F	20	Mexican	California	Headaches Eye pain		Spinal fluid exam.	13,200 p-84%	2¼ Mo.	No	Meninges plus ?	
12	Freeman and Weidman	1923	M	39	American	Penn.	Headaches Failing vision	Tumor	Spinal fluid exam.	"Negative"	3 Mo.	Yes	Meninges	Mesenteric gland
13	Sheppe	1924	M	48	American	Virginia	"Rheumatism" Dyspepsia	Unresolved pneumonia	Autopsy	8,000	2 Mo.	Yes (body)		Right lung
14	Bettin	1924	F	40	American	California	Headaches Vomiting	Encephalitis Tbc. mening.	Spinal fluid exam.		2½ Mo.	Yes	Optic Thalami	Right lung
15	Hansmann	1924	M	45		Mass.	Headaches Vertigo		Autopsy	10,000 to 14,000	2½ Mo.	Yes	Meninges	
16	Neal and Sapiro	1925	M	16	American	New York	Headaches Drowsiness	Encephalitis	Spinal fluid culture	12,400 to 28,000	1¾ Mo.	No	Meninges plus ?	
17	Wilhelmj	1925	M	48		Illinois	Headaches Earache	Abscess	Autopsy	11,000 p-80%	3 Mo.	Yes (head)	Meninges	
18	Lynch and Rose	1926	M	46	Jewish	Penn.	Headaches Vomiting	Tbc. mening. or Tumor	Spinal fluid exam.	10,300 to 17,400	5¼ Mo.	No	Meninges plus ?	
19	Rapaport and Kaplan	1926	M	54	Kurd	Indiana	Headaches	Meningitis	Spinal fluid culture		5½ Mo.	Yes	Meninges Brain subst.	Lungs Kidneys
20	McKendree and Cornwall	1926	F	50	American	New York	Headaches Failing vision	Encephalitis	Autopsy	7,000 p-74%	7½ Mo.	Yes	Meninges	



CHART 1.—The Systemic Cases of Torula Infection in Yearly Order of Publication—Continued

No.	Observer	Year	Sex	Age	Extraction	Geographic Location	Complaints	Tentative Diagnosis	Diagnosis Established	White Count	Duration	Autopsy	Type Lesion C. N. System	Other Organs Involved
21	Hall and Hirsch and Mock	1928	M	53	American	Illinois	Headaches Tingling of fingers	Abscess or Meningitis Tumor	C. S. fluid culture Biopsy	14,040 to 9,640	1 Mo.	Yes	Meninges Gasserian ganglia	Spleen
22	Wortis and Wightman	1928	M	20	American	New York	Headaches Failing vision Confusion Drowsiness	Abscess (frontal)	Spinal fluid culture	12,400 p-81%	3 3/4 Mo.	No	Meninges plus ?	
23	Hirsch and Coleman	1929	F	30	Negro	Illinois	Headaches Chest pain	Tuberculous meningitis	Spinal fluid exam.		5 Mo.	Yes	Meninges	Lungs—miliary
24	Maner by Ball	1929	M	54	American	California	Headaches Speech loss	Encephalitis	Autopsy	6,600 to 7,200	16 Mo.	Yes (head)	Brain substance	
25	Ball	1929	F	50	English	California	Confusion Delusions Drowsiness	G. P. I. committed	Autopsy			Yes	Meninges	Lungs Ileum
26	Stone (To be Published)	1929	M	cir. 50	American	California	Headaches Drowsiness		Spinal fluid exam.		2 1/2 Mo.	Yes	Meninges Brain	Lungs
27	Sheppe (To be Published)	1929	M	42	American	W. Virginia	Headaches Vertigo Stupor	Meningitis	Spinal fluid culture	11,000	2 Mo.	No	Meninges plus ?	

CHART 2.—Cases of Local Torula Infection

No.	Observer	Year	Sex	Age	Extraction	Geographic Location	Complaints	Tentative Diagnosis	Diagnosis Established	White Count	Outcome	Organs Involved
1	Brewer and Wood	1908	M	20	Russian	New York	Pain in back and upper abdomen	Sarcoma Thc. Osteo.	Smear and culture of contents		Recovery	Muscles of vertebral column
2	McGehee and Michelson	1926	F	26	Negro	Tennessee	Vaginal flow, pain in abdomen and left thigh	Inguinal abscess	Pus by smear and culture	24,800 p-68%	Recovery	Pelvic and inguinal abscess
3	Berghausen	1927	M	28	White	Ohio	Injury to tongue without healing	Ulceration of tongue	Culture from lesion	3,850 p-54%	Death	Tongue and unproved pulmonary lesion
4	Jones	1927	M	34	White	Ohio	Tonsillitis Pharyngitis Deafness	Syphilis	Culture		Arrested	Ulcerative pharyngitis

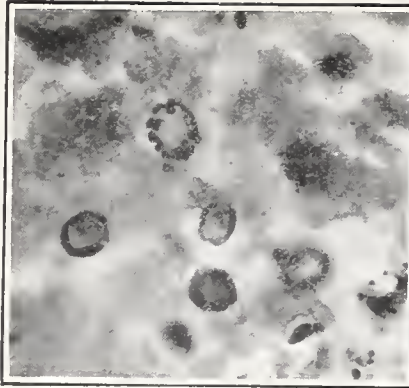


Fig. 4.—High power magnification of the yeast-like organisms from a fibrosed pulmonary tubercle, Case 2. Gram-Weigert stain.



Fig. 5.—Low power magnification of peritoneal surface of intestinal wall in Case 2, showing intense round-cell infiltration and tubercle formation. Diagonally at lower left is intestinal musculature.

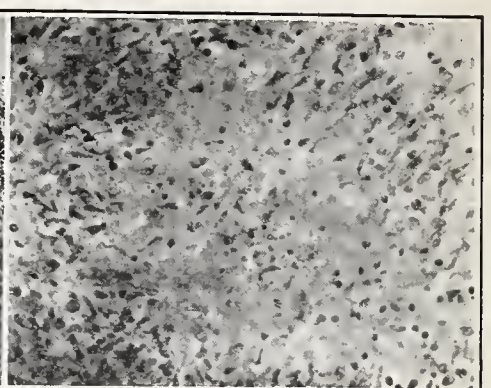


Fig. 6.—Low power magnification of a tubercle at the base of the intestinal ulcer in Case 2. One organism is clearly shown in the center. Gram-Weigert stain.

able to find definite evidence of an organic brain lesion. Examination of the eye-grounds showed no pathology in either fundus.

A lumbar puncture seven weeks after admission produced clear fluid, not under increased tension. Further examination of fluid not recorded. A month later his condition was somewhat worse, and he died after another four weeks. Total duration, sixteen months.

Postmortem examination limited to the head was performed the same day.

*Pathological.*—Weight of brain 1500 grams. No meningeal exudation. Convolutions not flattened.

In the left lateral ventricle, projecting from the caudate nucleus, is a nodular mass, firm in consistency and having a gray, glairy appearance. It extends posteriorly over the floor of the ventricle to the lateral portion of the thalamus. It extends inward and infiltrates the anterior portion of the internal capsule. Section of the mass presents a firm, gray, gelatinous, semi-translucent surface. It is well circumscribed.

The shape of the right lateral ventricle is normal, but in the deeper portion of the caudate nucleus is a definitely circumscribed mass, oval in shape and having dimensions of  $1\frac{1}{2} \times 1 \times 1$  centimeter. This shells out easily. On gross section this corresponds to the one on the opposite side in appearance.

Similar smaller lesions found in the left mid-portion of the cerebellum, the cortex of the left temporal lobe, right frontal lobe, and right occipital lobe. These have a "soapsuds" appearance.

The organisms are well demonstrated by Gram-Weigert method. They are present in enormous numbers, with but slight evidence of surrounding tissue reaction except for a few collections of lymphocytes. There is a great variability of the organisms in two respects: their size, and their staining reaction.

The smaller organisms have an azure cytoplasm and a blob of strongly basophilic matter always situated eccentrically. In some there are a number of globules circumferentially. The largest organisms stain strongly and homogeneously with basic dye, thus tending to obscure these globules, but they can many times be discerned. Roughly, they appear to vary directly with the size of the organism. All variations between the two extremes described may be observed.

#### COMMENT ON CASE I

There are no cultural data to complete this case, but it is so typical in gross and microscopic appearance of the "pseudo-tumor" type of Stoddard and Cutler as to be unmistakable. The usual lesions present the histolytic phenomenon with-

out material adjacent tissue reaction. The meninges are not affected. Clinically, as in many other cases, the diagnosis of encephalitis was made. Whether or not other lesions existed in the body is not known. This will serve as a type-case, where the involvement is limited to the brain substance. It will be noted in contradistinction to the meningeal type that the spinal fluid cell count is not altered. In the meningeal type, organisms are usually abundant in the spinal fluid.

**CASE 2.**—On October 5, 1928, the patient, an English female of fifty and one-half years, entered the psychopathic ward of the Los Angeles County General Hospital, the affidavit stating that "this patient is in a very weak physical condition and at times shows marked mental deterioration. She cannot carry on an intelligent, connected conversation, but rambles from one thing to another. She has not eaten for three days and is in such condition that she needs immediate care which cannot be provided at home."

While on the ward she slept a good deal of the time, was quiet, orderly, and complained of no pain. She was oriented as to person but not as to time or place, states she is in a "negro hospital," and that her husband will not give her anything to eat. Talked in a rambling incoherent manner. Answered questions poorly. Attempts to contact the husband for more satisfactory history were unavailing.

Examination revealed a somewhat emaciated and apparently exhausted white female of middle age, lying in bed. A ptosis of the left eyelid was present. There was noted a slight irregularity of the left pupil, and both were sluggish in their reaction to light. Examination of heart, lungs, and abdomen essentially negative. The knee-jerks were diminished, extremities resistant and tonic. Babinski negative. Urinalysis and blood Wassermann negative. Spinal puncture was not done. Two days later she was noted to have a distended bladder, and 300 cubic centimeters of dark urine with abundant sediment was removed. Forty-eight hours later 800 cubic centimeters were removed per catheter. The patient two days later—six days after admission—died an easy death while apparently asleep. Her temperature on admission was 96.8 degrees, pulse 108, respiration 28. The temperature remained subnormal, at no time exceeding 98.2 degrees and usually around 97.6 degrees.

*Pathological Report.*—Autopsy six hours after death. Lungs free in the pleural cavities. In either lower lobe was found a nodule one centimeter in diameter which was not definitely caseous, and appeared dry, as though some calcification had occurred. Lungs otherwise negative. Heart and aorta essentially nega-



tive. Liver showed slight passive congestion and beneath the capsule a number of small grayish white tubercles. The gall bladder contained one large cholesterol stone. The mucosa was entirely eroded. A loop of ileum and adjacent mesentery presented on the serosa numerous small grayish white miliary tubercles grossly quite typical of tuberculous peritonitis. On opening this loop of ileum an annular ulcer was seen with small tubercles in the base. Both kidneys were contracted from a chronic diffuse nephritis. The spleen on section showed one tubercle. Bladder: Hemorrhagic cystitis. Uterus small; cavity contained thick mucoid material and one endometrial polyp.

The brain was somewhat adherent to the cranial vault, particularly in the posterior fossa. The cerebellum was greatly lacerated in removal. Over the surface of either cerebral hemisphere and following the blood vessels, were seen numerous tubercles having an average diameter of two millimeters, but not as discrete and regular as ordinarily seen in tuberculous meningitis. There was some yellowish mucoid exudate on the superior surface of the cerebellum taken for smears.

A gross diagnosis of tuberculous meningitis, peritonitis and enteritis was made and smears of the cerebellar exudate examined for acid-fast bacilli. None could be found, but there was noted in the smear peculiarly distorted refractile bodies simulating yeasts. Sodium hydroxid preparations then revealed many hyaline encapsulated yeast-like organisms, many of which were budding. A diagnosis of *torula leptomeningitis* was made, later confirmed by Dr. Newton Evans, who in 1924 reported two cases from Los Angeles. Even at this juncture the appearance of the peritoneal lesion seemed so typical of tuberculosis that the death certificate was signed, using tuberculous enteritis and peritonitis as a contributory factor. These lesions were histologically proved later to be due to the same organism as invaded the meninges.

Microscopic examination of the nodule in either lung showed dense fibrosis in which were many refractile organisms. Gram-Weigert stain was found satisfactory for demonstrating these, the refractile membrane staining blue by this method. Similar stains of the intestine showed organisms in the base of the ulcer and in the tubercles of the serosa. This last section showed a very dense round-cell infiltration and many giant cells, many of which could be demonstrated to contain organisms. Neither in this location nor in the lung nodules was a hyaline capsule present. In the meninges the reaction was granulomatous in character, there being many giant cells, some very large, in which the organisms could be seen. The capsules were best seen in sodium hydroxid mounts and in the first few generations in culture.

**Bacteriology.**—With wet mount, using 10 per cent NaOH, the material taken directly from the meningeal tubercles showed small, definitely contoured



Fig. 7.—A. Surface of culture from one of Evans' cases reported in 1922, having a smooth, moist yellowish surface and rather regular edges. B. Surface of culture of Case 2, showing scalloped borders and a dry, wrinkled surface.

organisms outlined by a large refractile area, also definitely contoured. Some of these were budding.

The organism grew readily on all media. The first plants made on Sabouraud's media showed a beginning growth in twenty-four hours. On solid media the growth has a grayish cream-colored appearance, the surface being rather dry and crepe-like. It has a tendency to begin as distinct cup-like colonies which later fuse and cover the whole slant surface. The cultures present a yeast-like odor. The colonies are fairly resistant to pressure with the platinum loop and are very adherent to the medium. Wet mounts show budding yeast-like forms in clumps and chains, the chains at times presenting, after the budding forms, a mycelium-like structure; that is, a series of buds comes between the mycelium and the parent organism. For the first twenty-four hours or more, reproduction is almost entirely by budding; after that time the mycelia appear, and from then on it would seem, as a rough estimate, as though budding and mycelial production occur in about equal proportions. The mycelia branch, but neither lateral conidia nor terminal sporangia have been observed. The mycelia, as well as some of the organisms, contain small, highly refractile bodies exhibiting brownian movement. This has been a constant finding in transplants every fifteen days over a period of three months.

Growth was very rapid on Loeffler's blood serum, and on glucose agar—a little slower on Sabouraud's. In a large flask of liquid medium, the growth begins as small foci scattered through the medium, having a very fluffy cotton-like appearance, radiating about a central core. These grow to about two centimeters in diameter. Later they sink to the bottom of the flask, and lose the characteristic appearance.

The organisms are best studied in wet mounts, though they stain positively by Gram's method, either homogeneously and appearing as aniline oil droplets, or with smaller circumferential globules, similar to those seen in tissues. The organisms are not acid-fast, but counterstain more or less by the methylene blue. Their size averages about one-half again that of a red blood cell.

Fermentation reactions are as follows: acid and gas in maltose, acid but no gas in dextrose, galactose, and levulose, and only slight in saccharose. Neither acid nor gas in lactose or mannite. This differs from the cultures of one of Evans' cases, which we had for comparison, in that in his case, acid but no gas formed in maltose, and acid was formed in mannite.

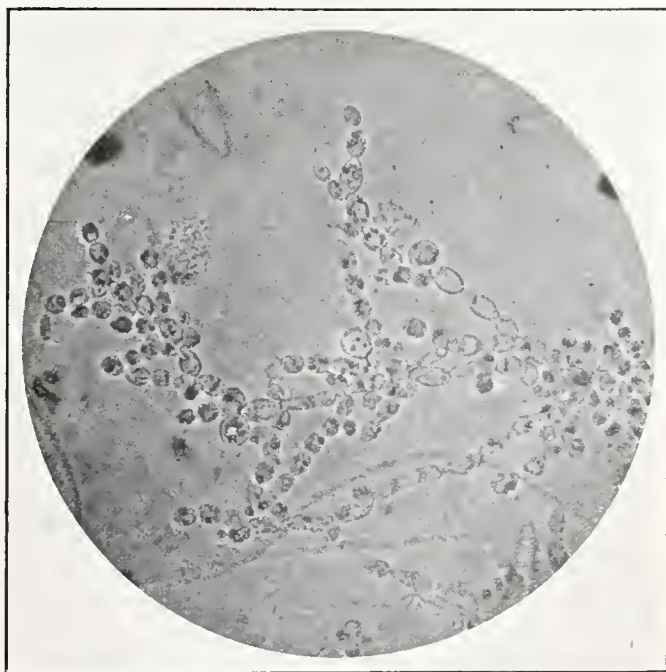


Fig. 8.—Wet mount with 10 per cent sodium hydroxid, showing the chains of budding organisms, some containing refractile bodies. The lower portion shows two mycelia.



## COMMENT ON CASE 2

This is clinically a case of torula; histologically an infection with a yeast-like organism; and culturally, distinct from any previously reported case. It seems, for the present at least, justifiable to record this as torula, pending the possible accumulation of like cases and the establishment of strict bacteriological criteria, and a more satisfactory classification of the fungi.

The unique features of this case are the intestinal ulceration and peritonitis, never previously reported, and the bacteriological findings including the dry furrowed growth, and the production of some mycelia after twenty-four hours. The fibrosed nodule in either lung represents the oldest lesion histologically, and therefore the probable atrium of infection. There was no evident active lesion in the lungs to account for the intestinal ulceration on the same basis as in tuberculous enteritis. The origin of the intestinal lesion is not apparent.

The cranial involvement was limited almost entirely to the meninges as in other cases, only slight superficial cortical destruction occurring from contiguity.

## OBSERVATIONS ON COLLECTED SERIES OF SYSTEMIC CASES

*Clinical and Pathological.*—Of twenty-six systemic cases the ages varied from thirteen to sixty-three. Four cases occurred within the second decade. The majority of cases occurred in middle life. The average age was 41.5 years. There were nineteen males and eight females. Two cases have been reported from Germany, one from Japan, one from Australia, and the remainder from the United States. Racial extraction apparently is an unimportant factor. Six cases have occurred in California, five in New York, three in Illinois, and others scattered from Florida to Massachusetts and the Middle West. (An attempt has been made to credit the cases to the states from which the patients came at the time symptoms were in evidence, and not necessarily the state from which the author reported them.) Twenty-one of the twenty-seven cases named severe headache among their chief complaints. Seven had visual disturbances (failing vision, diplopia, or nystagmus) while four were confused or completely disorientated. Drowsiness was mentioned as a prominent symptom in five cases. Meningitis as a diagnosis was considered in nine cases—thought to be tuberculous in five. Encephalitis was diagnosed in five, abscess considered in four, and tumor considered in four. Four cases were committed as insane, in two of which a tentative diagnosis of paresis was made. Another case (not committed) was considered to have senile dementia. It is evident that with such a bizarre clinical picture, the outstanding symptom of which is headache, the diagnosis is not easy. Especial care should be given to spinal fluid cytology in such obscure cases. The white blood count varied from normal to a

mild leukocytosis. The polynuclear percentage is usually not or but slightly raised. Three weeks is the shortest known duration, and two years the longest. The average duration of twenty-two cases is four and six-tenths months. Fifteen cases are below the average, and seven cases above. All systemic cases have been fatal. In four autopsied cases there was concomitant tuberculosis of lungs or peribronchial nodes. Twenty-one of the known systemic cases have been autopsied either partially or completely. Ten cases have had material involvement of the brain or cord substance; all but one of these (Maner, Case 1 in this report) also had meningeal involvement. Ten had meningeal involvement only. In one case (Sheppe) there was no known central nervous system involvement. There were no clinical signs and the head was not examined. If we add those cases from which a diagnosis has been made from spinal fluid examination or culture as being essentially meningeal in character, of which there are four, we have fourteen meningeal cases against ten cases involving the brain or cord substance, nine of which also showed meningeal involvement. In thirteen autopsied cases, lesions have been demonstrated or the organism recovered from other organs than the central nervous system. Of these thirteen there have been pulmonary lesions in ten, varying from acute processes to those of healing. The spleen, kidneys, mesenteric and bronchial glands, and even the bone marrow have been the sources from which the organisms have been cultured or demonstrated histologically. A positive blood culture has been obtained in at least three cases, two of these being at autopsy.

Of the local cases three have recovered or are arrested, and one is dead. This case had pulmonary pathology, probably torula infection, but it was not demonstrated to be such.

There are two distinct types of lesion histologically—the granulomatous and the histolytic, the latter occurring only within the brain substance, where endothelial reaction is minimum. The meningeal lesions are always granulomatous, as are also those occurring in other organs, giant cells and tubercle formation being prominent features. In several cases the pathologist has temporarily mistaken the meningeal type for tuberculous meningitis. Polymorphonuclear leucocytes are absent or but rarely present in the lesions.

*Bacteriological.*—In reviewing the cases, one is struck by the fact that many of them are preceded by, or have concomitantly, an upper respiratory infection, particularly sinusitis or otitis media, but in very few of these cases has the organism been demonstrated from these lesions, probably because suspicion is not aroused at the opportune time. In many cases lesions have been demonstrated in the lungs, both of acute and chronic nature. At present there is nothing to indicate that the atrium of invasion is other than



respiratory. Some cases of meningeal involvement undoubtedly come from extension through the cribriform plate while others, in all probability, are hematogenous, especially those like Case 1 of this report where the involvement is entirely within the brain substance, the meninges being uninvolved.

One is also struck with the fact that there are many cultural variations in the reported cases. Some start only on blood serum, others grow readily on all ordinary media. Some are pathogenic for laboratory animals, others are not. A detailed review of the bacteriology of the seventeen reported cases is in process of compilation, and will be reported at a later date together with some comparative observations on available cultures.

#### SUMMARY

There are twenty-seven known cases of systemic torula infection, and four local cases, making a grand total of thirty-one. The organisms in these cases differ somewhat in cultural characteristics and in pathogenicity for laboratory animals. The infection is much more common in middle life, and the most prominent feature is severe headache.

#### CONCLUSIONS

1. The diagnosis of tuberculous meningitis should not be made by the pathologist without the demonstration of acid-fast bacilli in the meningeal exudate, especially in adult cases, and even though ulcerative tuberculosis of the lungs be present. (Cases 1 and 2, Chart 1, had pulmonary tuberculosis.)

2. There are probably several closely similar organisms, as suspected by Stoddard and Cutler, which give rise to the disease known as torula, and which have a predilection for the central nervous system, and excite the same or similar histological pictures.

3. The atrium of invasion is probably in all cases the respiratory tract, either upper or lower.

4. Microscopic study of the spinal fluid, with the possibility of yeast infection in mind, should be done in obscure neurological conditions, especially when severe headache is a prominent symptom.

Thanks are due Miss Bertha Gannon for material bacteriological assistance.

1100 Mission Road.

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#### DISCUSSION

NEWTON EVANS, M. D. (1100 Mission Road, Los Angeles).—Doctor Ball has rendered an important service in collecting and presenting in greater completeness than has heretofore been done, the recorded cases of systemic infection with the so-called torula. This is a group of cases of peculiar interest to the pathologist, the mycologist, and the neurologist.

His two new cases each present features which are new. Case 1 is the only autopsied case presenting lesions of the brain substance without any meningitis. Case 2 has lesions of the intestinal canal resembling typical tubercles, which have not been recorded before. In this case also the morphology of the organism in the culture is unique in that there is both a typical budding process and a mycelial formation seen. I understand that the mycologists would classify such an organism as *Monilia*.

The peculiar tendency of systemic torulosis to involve the central nervous system is striking and of great clinical interest. It is not out of place to call attention again, as has frequently been done, to the importance of careful microscopic examination of cerebrospinal fluid in cases of meningitis or obscure nervous symptoms in order to detect the presence of these characteristic organisms, which have frequently been mistaken for lymphocytes by careless observers.

To the pathologist and the mycologist the loosely related group of higher fungi which are capable of invading the human body, producing lesions of the viscera and frequently causing death, constitute an important field of investigation. Among these we now recognize the *Coccidioides*, *Blastomyces*, *Histoplasma capsulatum* of Darling, and the *Torula histolytica* of Stoddard and Cutler and the variety described in Case 2 of Doctor Ball's series, classified as a *Monilia*.

Doctor Ball has wisely emphasized the confusion which exists and the many efforts at classification which have been made. It would appear that California is a fruitful field for collecting clinical material for the study of many of these organisms. It is to be hoped that an organized effort may be initiated for the prosecution of an extensive study of this problem and that funds for the adequate support of such an undertaking may be provided.

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WILLARD J. STONE, M. D. (65 North Madison Avenue, Pasadena).—I have been interested in Doctor Ball's report of two instances of torula infection and his summary of the literature, since Doctor Sturdivant and I have recently reported the findings obtained in a study of meningoencephalitis due to torula which occurred in one of our colleagues at the Pasadena Hospital (*Archives of Internal Medicine*, October, 1929). We were not able to find as many authentic cases in the literature as Doctor Ball has reported, but it is apparent that many more instances must have occurred and not have been recognized as such due to the absence of histologic or cultural studies. The chief interest in differentiating the lesions of torulosis from those of oïdiomycosis lies, so far as is now known, in the benefit which may be secured from the administration of iodids in oïdiomycosis. In torulosis no known therapeutic agent has been found of value in treatment. In torulosis the organisms have predilection for the central nervous system and lungs, although the liver, spleen, and kidneys may be involved. The skin, or adjacent mucous membranes, or bones have rarely been affected. Pathologically, nodules composed of giant and epithelioid or lymphoid cells with or without caseation have been found.



An important distinctive point has been that polymorphonuclear leukocytes are absent in the nodules and in the surrounding exudate. Torula organisms multiply by budding and do not produce endospores or fermentation of the sugars in culture, or mycelia in tissues or culture. Torula infection has shown marked pathogenicity for mice and rats, while guinea-pigs, rabbits, and dogs have been only slightly susceptible.

In oïdiomycosis the lesions have been found to involve the skin and bones, but they may involve all organs. The central nervous system has rarely been involved. The lesions likewise consist of nodules, with or without caseation or abscess formation, but polymorphonuclear infiltration has been a more or less constant finding. The organism of oïdiomycosis has been found but slightly pathogenic for all experimental animals and, while they likewise multiply by budding and do not produce endospores, they do produce fermentation of sugars and mycelia are developed in culture.

Undoubtedly many cases of torulosis and oïdiomycosis have been confused, since the characteristics mentioned are not always distinctive. Likewise in torulosis of the central nervous system and lungs (the two most common lesions), tuberculosis of meninges or lungs, brain tumor, or epidemic encephalitis must have been frequently simulated. It is possible that mutation changes may occur in torula and oïdia organisms which alter their cultural and tissue characteristics in ways at present unknown. In Doctor Ball's second case, which he has classified as torulosis, the organisms multiplied by budding and produced mycelia in culture which confuses the classification. In Rappaport and Kaplan's case (*Archives of Pathology*, May 1926), spinal fluid and blood cultures revealed a yeast-like organism which they classified as torula. At autopsy repeated attempts to isolate torula organisms were unsuccessful, but they then obtained cultures of oidium-like organisms.

It will be important in order to further knowledge of these organisms, for physicians to report, in future cases, the results of cultural and tissue studies. A lumbar puncture should be done for culture purposes in all instances of suspected tuberculous meningitis or encephalitis. Among the nineteen cases which Sturdivant and I believe were authentic instances of torulosis, seven were from California.

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DOCTOR BALL (Closing).—It seems very evident that cultural studies will be a step forward in the solution of the problem of torulosis. From a very cursory examination of the gross and wet mount appearance of cultures of some previously reported cases, acquired since this presentation, it is evident that the organisms are not all identical. It is very striking that very similar histologic pictures are produced by them, as judged from the reports.

Anyone who studies the literature with care must of necessity admit all cases included in the chart or consider the authors who reported them as incapable of proper observation. It is evident that if Stoddard and Cutler include two specific cases from the German literature as torula, and another author uses the same cases under a different name and reports more like them, that the cases are still torula though they may not be called such in the literature and though the decision must of necessity be arrived at by indirect evidence and reasoning.

I contend that at the present time torula disease, as reported by many authors is the name for a clinical and pathological picture caused by any yeast-like fungus affecting the central nervous system which is distinct from oïdiomycosis or coccidioidal granuloma, and is not a well-defined bacteriological or mycological entity. I hazard the opinion that probably not more than 50 per cent of the cases reported in the literature as torula can be proved beyond doubt to be due to the *Torula histolytica* of Stoddard and Cutler. Herein lies the problem of this disease.

## DUODENAL ULCER—ITS SURGICAL TREATMENT

By ROBERT A. OSTROFF, M. D.  
San Francisco

DISCUSSION by P. K. Gilman, M. D., San Francisco;  
Gunter W. Nagel, M. D., San Francisco.

IT is not my intention nor purpose in this paper to discuss the merits or the indications for the medical or surgical treatment of duodenal ulcer, one against the other, nor to formulate indications placing these cases in one or the other category. Given a patient with a duodenal ulcer who is undoubtedly one for surgical treatment, what procedure will the surgeon follow to guarantee to that case the surest relief?

### OPINIONS NOTED IN THE LITERATURE

On reviewing the literature of the last few years on the subject of the surgical treatment of duodenal ulcer, it is at once apparent from the voluminous writings that there exist diversified opinions as to the proper line of surgical attack. A recent visit to various surgical centers in this country demonstrated the diverse opinions and the variety of operations performed. The small yet increasing number of American surgeons led notably by the groups, Berg and Lewisohn at Mount Sinai Hospital, New York, and Strauss of Michael Reese Hospital, Chicago, who have conducted careful investigation in their respective large clinics, shows that more have swung into line with the European surgeons, Haberer, Finsterer, Neuber, and others, who hold that Konjetzney's gastritis is found whether gastric or duodenal ulcer be the cause. In the treatment of gastric ulcer the pendulum has swung toward the more radical excision surgery. Aside from the one consideration that malignancy is more apt to develop in the gastric ulcer, there is no reason for using this resection type of surgery to cure the disease in one case and not in the other.

In the examination of the pathologic specimens in their series of primary subtotal gastric resections for duodenal ulcer, Strauss has shown that the changes are not confined to the ulcer alone, but that the first part of the duodenum and stomach take part in the inflammatory process, the more so as the case falls under the classification of acute attacks, clinically. Occasionally the entire organ is involved in this process and he believes that many surgeons err in rushing the patient to operation in this stage. He believes that the placing of the new stoma in case of gastroenterostomy in the inflamed zone, predisposes the patient to the development of new ulcers.

The cause of gastroduodenal ulcer has been attributed in various theories to the use of non-absorbable suture, the use of clamps of crushing type, and the inherent tendency to ulcer formation. Operations designed to do away with any clamps or use of nonabsorbable sutures have been elaborately described. I doubt if these two factors are of great importance since gastrojejunal ulcers are reported to have developed in cases where both absorbable and nonabsorbable sutures



have been used. Some men report that they have never seen an ulcer at the site where clamps have been applied. In one patient, even two years after the operation, they found reaction resulting from the clamps and marks in the stomach wall without any ulcers at these sites.

#### ETIOLOGY

The more probable causes of gastroduodenal ulcer are those put forward by Strauss as follows:

1. The pathologic changes not confined to the site of the ulcer alone but to the adjacent first part of the duodenum and stomach.

2. Physical and chemical irritation associated with digestion, demonstrated in cases where the duodenum is found healed following gastro-enterostomy.

3. Leaving the involved tissue intact at operation.

To offset these causes of ulcer formation following gastro-enterostomy, he advises, first, not to rush the patient to the operating room after admission to the hospital, but to allow time for the inflammatory process to subside in all cases except that of perforation, or at least to allow the surrounding inflammation and edema of an acute nature to improve and in many cases to refrain from placing the new-formed opening in inflamed tissue; second, to use an operation which will give the stomach a rapid emptying time, allowing for no accumulation and action of acids formed; third, to remove all involved tissue.

The ideal surgical operation is the one which will give the patient the most relief from his disease, leaving the organs nearest their normal anatomic-pathological state. Many factors, and especially that of surgical risk, influence surgeons in their choice of surgical procedure. As Horsley says, it depends not only on the character of the lesion, but to some extent on the technical choice of the surgeon. The one who performs partial gastrectomy skillfully may wisely lean more to this operation than the surgeon who infrequently does a partial gastrectomy and who prefers a gastro-enterostomy or a pyloroplasty. This I believe is the crux of the situation. Gastro-enterostomy with or without ulcer excision, pyloroplasties of this or that type, plications and section of the pylorus combined with gastro-enterostomy, all have their advocates. Many surgeons are adherents of some special type of operation because their surgical abilities are limited to one or the other methods and they have not attempted or fear to do radical or near radical surgery.

#### INDICATIONS FOR SURGICAL TREATMENT

There are at least four conclusive or definite indications for surgical treatment of duodenal ulcer: continuous pain; hemorrhage, especially if profuse and recurrent; obstruction, and perforation.

And we might add, no improvement in a reasonable period of medical regimen, say six to eight weeks.

In cases of resection of the stomach for conditions other than ulcer, no matter what suture

material had been used, whether absorbable or nonabsorbable; whether clamps had been applied; whether low or high resection had been done, or where the gastro-enterostomy had been placed, there has never been a gastrojejunal ulcer reported. The inflammatory process in the stomach and duodenum and the remaining acidity are apparently major factors in the relief of peptic ulcer. In a recent article Elman says many observers note the relief of symptoms usually in those patients who after operation persistently show a low or absent gastric acidity. In 1909 Wilcox showed that the gastric contents following simple gastro-enterostomy were far less acid than before and contained bile constantly. Similar occurrences were reported by Bohmansson. He added, however, that this anacidity tends to disappear in the course of months or years, which may account for the recurrence of symptoms in many patients. In his analysis of cases of gastric resection, on the other hand, he found an almost complete and permanent disappearance of acid in the gastric contents after operation. Klein reported similar findings. Elman concludes that reduction of gastric acidity is a normal and, probably, an essential phenomenon which takes place through the reflux of the alkaline pancreatic juice into the stomach. Bile, being acid rather than alkaline cannot be active in causing this neutralization. In applying the principles here stated, clinically it can be seen that any operation which creates an opening large enough to exclude any danger of its narrowing, and which allows free regurgitation of duodenal and pancreatic secretion into the stomach, is the logical procedure to employ. The work of Olch showed that a Finney pyloroplasty hastens gastric neutralization. Therefore any widening of the pyloric opening might suffice if this were the only requisite for the relief of duodenal ulcer. Patients with duodenal ulcer have been shown to have a marked delay in neutralization of the test-meal of 300 cubic centimeters of 0.5 per cent HCl. Gastric resection, on the other hand, provides a wide communication between the stomach and the portion of the duodenum or jejunum chosen and in addition removes the tissues involved in the inflammatory process as well as multiple ulcerations which may be present and easily overlooked.

To the younger surgeon, away from large medical centers and without the aid of consultation with experienced older surgeons, it is indeed a question not easily solved to decide the proper surgical procedure to follow, in order that his patient with duodenal ulcer may have the greatest chance for complete relief from operation. Should he subject the patient to a greater risk by undertaking more radical surgery of resection, to give him assurance of a more lasting and surer relief from his symptoms, as advocates of these methods claim; or, on the other hand, would it be better to do merely a gastro-enterostomy with not so great an immediate risk and take the word of its proponents that relief will follow in a large per cent of cases?



The advocates of extensive partial gastric resection for nearly all types of duodenal ulcer, even small uncomplicated ulcers recurrent after medical treatment, seem to many as perhaps overzealous in their attempts at cure. The incidence of development of gastroduodenal ulcers following gastro-enterostomy is quoted by various workers as being present in 2 to 34 per cent of cases, probably each man's conclusions being affected markedly by his argument for the particular attitude he assumes as to this type of surgery. The percentage of cures following gastro-enterostomy and similar procedures is given variously at 50 to 85 per cent.

Many prominent and able surgeons advocate, and rightly to a large degree, that each case is a problem unto itself and no operation should be regarded as standard for all cases of duodenal ulcer.

Horsley says that, aside from malignant conditions, the proper field for partial gastrectomy cannot be definitely laid down, and that it depends not only on the character of the lesion, but to some extent on the technical choice of the surgeon. The solution as to the proper surgical treatment of duodenal ulcer can only be reached by a consideration of the degree of success reached by investigators in clinics that handle large numbers of cases. The increased number of careful and able surgeons who perform partial gastric resection for duodenal ulcer would indicate the worth of this type of operation.

516 Sutter Street.

#### DISCUSSION

P. K. GILMAN, M. D. (2000 Van Ness Avenue, San Francisco).—The operative treatment of duodenal ulcer is not a routine matter. Each case must be subjected to careful study, and the proper surgical treatment depends upon this study and a further study of the situation found when the abdomen is opened.

Of equal importance with the operative procedure, no matter how limited or how extensive this has been, is the immediate and remote after-care and medical supervision of the patient. Too often is this neglected and a probable good result is allowed to become a poor one, bringing surgery into disrepute.

Surgery is indicated in cases of duodenal ulcer where there is recurring hemorrhage, acute perforation, chronic obstruction, or where medical treatment has yielded no results.

In cases of ulcer with bleeding I feel one should be very conservative in recommending surgery. It should be used only in those cases where proper medical measures have failed.

In acute perforation it is a good rule to limit surgical activity to the relief of the immediate condition. If simple closure of the perforation may be accomplished without encroaching upon the lumen of the duodenum, this is the procedure of choice, otherwise gastro-enterostomy should be added.

In certain clinics in this country, extensive resection for duodenal ulcer is practiced as against the simpler procedure of gastro-enterostomy, which is in more general use. In Europe resection is even more popular than in America. What is accomplished by any form of treatment in ulcer of the duodenum will not be clear until the etiology is known.

In general the least surgery that will accomplish certain results is best. Adequate drainage of the stomach is important. This may be accomplished by a properly placed and formed gastro-enterostomy. In cases of pyloric stenosis this alone is usually sufficient. A certain percentage of secondary ulcers form

following gastro-enterostomy, especially in high-strung patients. Removal of a duodenal ulcer and placing the pyloric sphincter at rest is followed by excellent results in those cases with the ulcer readily presenting.

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GUNTHER W. NAGEL, M. D. (2000 Van Ness Avenue, San Francisco).—The cause of duodenal ulcer is not known and, therefore, the treatment has not been placed upon an absolutely sound basis. As Doctor Ostroff states, there are various methods of procedure in the treatment of duodenal ulcer, each with its own strong adherents.

Duodenal ulcer is a combined medical and surgical problem. Medical treatment is effective in many cases, but is not entirely without danger. Hemorrhage and perforation occasionally occur while the patient is under medical treatment.

Radical resection in cases of duodenal ulcer has not gained in popularity during the last few years. Gastrojejunal ulceration occasionally follows gastric resection for duodenal ulcer. The mortality following resection even in the best hands is greater than that of conservative procedures.

A properly placed gastro-enterostomy gives excellent results especially when there is obstruction at the pylorus. Were it not for the occasional occurrence of gastrojejunal ulceration following gastro-enterostomy, this operation would leave little to be desired. The various forms of pyloric exclusion are not satisfactory and are followed by an increase in the occurrence of jejunal ulcers.

Partial duodenectomy together with excision of the anterior portion of the pyloric sphincter muscle gives excellent results in properly selected cases, and is an absolute protection against the occurrence of jejunal ulceration. It is the operation of choice in cases complicated by hemorrhage. Its application is limited for technical reasons; it should be done only in those cases where the lesion is readily accessible and the tissues can be united without tension.

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DOCTOR OSTROFF (Closing).—I wish to express my appreciation to Doctors Gilman and Nagel for their constructive criticism and discussion of the salient features of this paper.

Until the etiology of this disease is known no procedure will have a scientific basis, but its value can only be judged by its effectiveness in giving the greatest amount of relief or cure. We have the results achieved by surgical clinics in which large numbers of duodenal ulcers are operated, and it is upon these statistics that surgeons may judge the relative worth of the many operations devised for this disease.

Doctor Nagel says that the occasional occurrence of gastrojejunal ulcer is all that stands in the way of gastro-enterostomy. Many large clinics report this occurrence in as many as 30 to 34 per cent of cases and this is undoubtedly too high to give this operation choice over most other procedures. The cure of the disease by the simpler operation of gastro-enterostomy has not achieved the pinnacle of success when this is quoted by various authorities as ranging from 50 to 85 per cent. This is a wide variance of results and indicates that gastro-enterostomy has fallen far short of its goal since it has had the greatest test of all operations, particularly in America, where it has been more widely used. How much larger the percentage of occurrence of jejunal ulcer would be or the development of a vicious circle or the number of cases in which relief of the ulcer by gastro-enterostomy failed, we can only surmise. If the results of cases operated at large by the army of surgeons in America could be obtained instead of simply those of well-trained surgeons in the larger clinics, our knowledge of the subject would be more complete.

In a recent report, Elman is attempting to study the success attained in various types of operations for the relief of duodenal ulcer by measuring the rate of acid neutralization, the principle upon which the success of such operations depends. He contends that the rate of neutralization is the important factor.



## ANESTHETIC GASES\*

## THEIR PURIFICATION AND STANDARDIZATION

By DONALD E. BAXTER, M.D.

Glendale

THE savant, Dr. Horace Wells, if permitted to view present-day methods of gas manufacture, would be appalled at his own audacity in foisting so crude an anesthetic on an unsuspecting public; and yet a full half century elapsed before any real improvements had been made in the method of gas manufacture.

It is a well-known fact that the essential problems of purification were not considered of sufficient moment to attract the attention of chemists or research men, but were solved, or partially solved, in a practical way by the various manufacturers.

Such men as Sholes, French, Clark, Francis Cheney and Johnson have been, in the main, responsible for many of the refinements which have made nitrous oxid a safe and sane anesthetic.

## MANUFACTURING METHODS AND PRODUCTS

The conversion of raw materials into a finished anesthetic gas embraces many and varied complicated procedures and each manufacturer employs methods in which modesty seemingly plays but a small part when it comes to advertising his wares. However, be that as it may, the gas which you use today is to all practical intents and purposes a good product, and great credit is due the manufacturers for their work during the last decade.

In order to thoroughly appreciate the gradual improvement in medical gases, one has only to go back a short ten years. It was a common experience at that time to open a valve and be greeted with a dense cloud of white fumes, or possibly the brown fumes of nitric acid, which brought offense to all within its reach. All gas was wet, and to a point where no one expected a smooth flow without the addition of electric heaters or hot-water bags to thaw out the cylinders.

Toxic by-products, accumulative in nature, prohibited extended anesthesia. It was a brave person who dared give straight gas throughout a long operation. As late as 1920, a prominent eastern physician and hospital executive, who operated a small institution, informed me that at frequent intervals they had experienced anesthetic difficulties due to some unknown by-products. Their patients, after a brief time, exhibited an ashen pallor, the respiration was shallow and then imperceptible, and death would have resulted if the gas had been continued. Forced oxygen, respiratory or heart stimulants showed no beneficial results. Later it was found the trouble was caused by hydrazines which had not been removed, due to inefficient purifying solutions. Today modern methods of production have entirely eliminated the possibility of such contamination.

Nitrous pentoxid was frequently encountered, and I have had the unique experience of actually

photographing the brown fumes as they were released from the cylinder. Fortunately the fumes from such cylinders were so acrid and irritating that they could not be inhaled and were recognized before causing serious complications.

A careful analysis of the manufacturers' problems proved conclusively the need of adequate laboratory facilities, not only for plant control but as a factor in the solution of the many problems connected with gas purification. The need for standard specifications of raw products was also necessary. With the advent of scientific methods came the demand for well-trained, intelligent, and conscientious employees, who are now an important factor of gas production, sales, and service.

## OBLIGATION OF CARE IN MANUFACTURE

It is logical to suppose that all medical gases, including nitrous oxid, ethylene, oxygen and carbon dioxid, are as important to the patient, to the surgeon, and the anesthetist, as any potent drug or chemical used in the hospital or laboratory. Not only are the reputations of the operator and the anesthetist at stake, but the life of the patient, which is of a greater importance, must be taken into consideration. Therefore it behooves the medical fraternity to demand the highest possible standards from the manufacturers.

It is not enough to know that an anesthetic gas is usually good, or is fairly consistent in its purity. The surgeon must at all times be assured of a standard product, a product that will give consistent results and never vary in any way. To this end the profession must demand a chemical analysis covering the content of each and every cylinder. Such an analysis should specifically state the exact purity of the gas, the percentage of moisture present, and in addition a statement covering each individual impurity common to the gas in question. This procedure does not, in the long run, work a hardship on the manufacturer, but serves to create additional confidence in his product, and consequently greater sales.

Such a procedure may be considered by many to be an unnecessary refinement, inasmuch as there is no record of a single fatality directly traceable to nitrous oxid gas produced by either of the two companies now operating on the Pacific Coast. One cannot say as much for the "fly by night, stock-selling institutions" that have invaded the field in past years.

There are several obvious reasons why a chemical analysis is most necessary. Whenever personal equation enters into production work there is always the liability of failure—a leaky or acid-corroded tower pipe which would permit the raw gas to escape directly into the storage tanks; an error of one decimal point in the calculations of acid or lye strength might, if not checked up by the plant control laboratory, result disastrously to every one concerned. It is true that most accidents of the kind are discovered at once. However, without proper chemical control, there is always the possibility of a coroner's verdict being the first indication of plant failure to live up to

\* Read before the Anesthesiology Section of the California Medical Association at the Fifty-Eighth Annual Session, at Coronado, May 6-9, 1929.

proper standards. All medical gases should be included, but more especially nitrous oxid, and ethylene. Oxygen should be certified as to purity, inasmuch as a slight air or nitrogen dilution is productive of inconsistent results. In addition moisture tests are very important, inasmuch as this gas is compressed with soap water as a lubricant. Frequently the cylinders will contain a quantity of accumulated rancid soap water, which has in many instances produced an acute persistent nausea.

#### SPECIFIC RECOMMENDATIONS

Much could be written on medical gas purification and plant management. I shall mention only those points which are of interest to anesthesiologists, and which in the main should apply to the production of all gases.

The progressive producer exerts constant vigilance and keeps close tab on cylinders, as they represent not only a huge investment, but their condition as regards cleanliness and appearance is indicative of either good or poor management. Cylinders should be washed, steam-cleaned, and repainted on each return to the factory. Especially during the past few years during which ethylene has come into general use, as there is always a real danger due to back pressures causing an interchange of gas from one cylinder to another.

Routine washing and steaming removes all gas, traces of grease, soap water and scale, leaving the container absolutely clean and dry. The removal of the iron scale and rust is in itself of great value, inasmuch as fully 90 per cent of all valve trouble on gas-oxygen machines was caused from that source.

Cylinder valves, on each return to the factory, should be removed from the cylinder, taken apart, repaired and inspected before replacing, thus avoiding the inconvenience and expense of leakage.

All raw products used in the preparation of medical gases should be produced or purchased under the most rigid chemical and physical specifications, and price should not be a deciding factor.

In the case of nitrous oxid, only the best grades of ammonium nitrate should be used. Low grade, cheap nitrates are always a source of danger, not only to the manufacturer but to the consumer.

All chemicals entering into neutralizing washes should be of standard grade, the solutions should be titrated to a definite standard which will create a safety factor that will be ample to remove all impurities. These solutions should receive routine analysis and a definite strength should be maintained.

Moisture content plays an important rôle and the modern plant must be equipped with apparatus which will efficiently reduce the moisture to a point where the gas will flow smoothly and without freezing. The plant chemist is indispensable, as every run of gas necessitates not only careful supervision, but an exact moisture determination. The moisture content of medical gases under ordinary conditions of temperature and pressure

within the cylinder should not contain over .009 per cent of water, consequently the driers must receive careful and costly attention.

Chemical analysis is the last and most important procedure in the manufacture of all medical gases. It is true that there are many successful manufacturers throughout the country who rely upon physical findings of their gas, such as odor and color tests. However, I feel that the personal satisfaction derived from routine laboratory findings is well worth the time and expense involved.

With the advent of higher standards of production an adequate method of gas analysis covering the entire field in question has been gradually perfected. The necessary apparatus has been combined into a single unit, thus increasing the accuracy and decreasing the time factor for complete determinations.

In conclusion, I wish to impress the advisability of demanding higher standards in the manufacture of anesthetics as well as a routine analysis of each and every cylinder.

Box 577, Glendale.

## THE LURE OF MEDICAL HISTORY

### HIPPOCRATIC MEDICINE\*

#### PART III

By LANGLEY PORTER, M. D.  
*San Francisco*

THAT surgery, even among primitive men, should have been practical and rational, is not to be wondered at. A combatant drops a rock on the head of his enemy; on the hunting field a wild boar or an angry stag gores the hunter; among the hazards of daily life are sprains, bruises and fractures from numerous causes. Such injuries, it was apparent to the simplest mind, were caused by calculable forces. Equally apparent was the fact that cleanliness, soothing applications and manipulative measures were helpful.

Up to the fifties of the nineteenth century, when Astley Cooper restudied the subject of fractures and dislocations, there was no guide for their treatment other than the Hippocratic directions and these had been in effective use for nearly twenty centuries. And in spite of x-rays and modern ingenuities, even orthopedic surgeons might be stimulated to thought by a study of the Hippocratic methods of reducing dislocations. The treatment of shoulder dislocations is among the most interesting to read.

In Hippocratic times, dislocations were common; in those days athletic games were generally indulged in, because bodily development through gymnastics, particularly wrestling, and its care through the free use of water and sun baths, was considered the major prophylaxis against disease. The centers for athletics were called palaestrae and each palaestra had its own physician-director who soon became skilled in the treatment of fractures and dislocations.

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Part II was printed in the April issue.



Other physicians, attached to armies, became adept in the care of wounds, and the fact that Greeks were adventurous, given to following the sea and to voyaging into far countries, as well as the custom of slave-holding, brought about the development of industrial surgery on a scale that would gladden some of our present-day accident hounds. I shall quote from some of the Hippocratic writings on surgery rendered in the third volume of W. H. S. Jones' edition of the Corpus. The mode of thought used by the writers is strikingly like our own—allowing for the fact that the impossibility of human dissection robbed them of any chance of acquaintance with the details of intermediate anatomy. That the Greeks of those days were thorough masters of surface anatomy is testified to by their wonderful sculptures of the human body as well as by the vase paintings showing the activities of warriors and revelers. The following fragment illustrates their teaching in regard to dislocations of the shoulder:

"Those who have frequent dislocation of the shoulder are usually able to put it in for themselves. For by inserting the fist of the other hand into the armpit they forcibly push up the head of the bone, while they draw the elbow to the chest. And a practitioner would reduce it in the same way if, after putting his fingers under the armpit inside the head of the dislocated bone, he should force it away from the ribs, thrusting his head against the top of the shoulder to get a point of resistance, and with his knees thrusting against the arm at the elbow, should make counter-pressure towards the ribs—it is well for the operator to have strong hands—or, while he uses his hands and head in this way, an assistant might draw the elbow to the chest." . . .

"There is also a way of putting in the shoulder by bringing the forearm on to the spine, then with one hand turn upwards the part at the elbow, and with the other make pressure from behind the joint. This method and the one described above, though not in conformity with nature, nevertheless, by bringing round the head of the bone, force it into place."

The writer goes on with the following criticism:

"The theorizing practitioners are just the ones who go wrong. In fact the treatment of a fractured arm is not difficult, and is almost any practitioner's job, but I have to write a good deal about it because I know practitioners who have got credit for wisdom by putting up arms in positions which ought rather to have given them a name for ignorance. And many other parts of the art are judged thus: for they praise what seems outlandish before they know whether it is good rather than the customary which they already know to be good; the bizarre rather than the obvious. One must mention then those errors of practitioners as to the nature of the arm on which I want to give positive and negative instruction, for this discourse is an instruction on other bones of the body also.

"To come to our subject, a patient presented his arm to be dressed in the attitude of pronation, but the practitioner made him hold it as the archers do when they bring forward the shoulder, and he put it up in this posture, persuading himself that this was its natural position. He adduced as evidence the parallelism of the forearm bones, and the surface also, how that it has its outer and inner parts in a direct line, declaring this to be the natural disposition of the flesh and tendons, and he brought in the art of the archer as evidence. This gave an appearance of wisdom to his discourse and practice, but he had forgotten the other arts and all those things which are executed by strength or artifice, not knowing that the natural position varies in one and another, and that in doing the same work it may be that the right arm has one natural position and the left another. For

there is one natural position in throwing the javelin, another in using the sling, another in casting a stone, another in boxing, another in repose. How many arts might one find in which the natural position of the arms is not the same, but they assume postures in accordance with the apparatus each man uses and the work he wants to accomplish."

Not merely the technical side of the profession interested the writers of the Corpus; to them, matters of deportment and ethics were of paramount importance. A gem worthy to be considered and cherished by those of us who have to meet one another on our daily rounds reads in this way:

"Wherever there is the love of man there also is the love of the art. There is nothing wrong if a physician finds himself embarrassed in the presence of a patient. If on account of his inexperience he fails to comprehend the situation clearly, he should call in other medical men in consultation, so that after a common study it will be possible to be certain about the condition of the patient and to help him. The physicians who come together for consultation should never dispute among themselves or ridicule one another."

#### THE DEPARTMENT OF THE PHYSICIAN

Among the writings is one entitled: "Concerning the physician." It contains a number of interesting precepts governing the deportment of the physician, admonitions about his working place and his instruments, and some advice in regard to minor surgery. Somewhat resembling this is another book entitled "Decorum." In it there is taught that philosophy and medicine are interdependent; it contains precepts instructing the physician how he should enter the sickroom, how he should conduct the examination of the patient, and directions as to the mode of his speech. In this book "Decorum" there are expressions so apt that it seems impossible that they were written twenty centuries ago:

"It is necessary to keep simple remedies ready for use and to take them along on going abroad, for it is impossible for the physician, at the last minute, to choose the things that he needs from amongst many others.

"From the moment that the physician enters the sickroom he must pay attention to the way in which he seats himself, to his behavior, see that he is properly dressed, remain serene in his facial expression, and in his actions, pay careful attention to the patient, responding tranquilly to the latter's objections and not to lose patience or calmness when difficulties present themselves. The most important rule is to repeat the examination frequently in order to avoid the chance of deceiving himself. It is necessary to remember that patients often lie about having taken the remedies prescribed. . . . It is necessary to study the position of the patient in bed, to note the reaction to noises and to odors. All the physician's directions should be given in a quiet and friendly way; nothing should be revealed to the patient of the things that may happen to him or threaten him in the future, because through such knowledge many sick have been pushed to extremity."

Again the ever recurring appeal to reality is found in a paragraph which runs as follows:

"One must attend in medical practice, not primarily to plausible theories, but to experiences combined with reason. If the mind begins to act, not from a clear impression, but from a plausible fiction, it often induces uncertainty and trouble. No harm would be done if bad practitioners received their due wages, but as it is, their innocent patients suffer. Affirmation and talk are deceptive and treacherous, therefore one must hold fast to facts, occupy oneself with facts per-



sistent'y, if one is to acquire that ready and infallible habit which we call the "art of medicine."

From the Hippocratic writings it is clear that, although some Greek citizens were given to the support of medicine as it was practiced in the temples, and while others—probably the great mass of the population—were the victims of magicians and sorcerers and of the venders of amulets and charms, there were still enough clients, especially on the Ionian shores of Asia Minor and in the colonies in southern Italy and Sicily, to support a great and well-organized group of scientific-minded physicians. It is equally clear that this group of practitioners was uninfluenced by magic or philosophy or theology, and that the relations of its members to one another and to those they served were guided by one of the highest ethical conceptions that the human spirit has yet accomplished.

#### THE OATH

The fact that the Asklepiads, of whom Hippocrates provides the outstanding example, were bound to their craft and their clan by an oath strongly testifies to some past affiliation with the priests of Apollo. Furthermore there are many passages in other books—"Aphorisms," "On the Physician," "Precepts," "On Decent Habits"—which show that the physician was called to hold himself to a life of dignity, order, morality and leadership—to be guided by a philosophy of high purpose and of personal detachment, akin to the philosophy that guides the best of theologians. And yet, no trace of the supernatural, tinctures the Asklepiad principles insofar as they touch his art. The oath, which is familiar to every medical man, was sworn to by Apollo the physician, Aesculapius, Hygeia, Panacea, and all the gods and goddesses.

The oath divides into two groups of promises: the first group recited the novitiate's duties to the guild and to his teachers, binding him to treat the children of his teacher as brothers, to teach them without fee, to instruct them fully, and as well those, and only those, other students who have taken the oath. If circumstances made it necessary, he was bound to relieve his teacher's financial distress and to supply him with the means of livelihood.

The second part of the oath was a statement of the physician's duties to his patient. He bound himself to do all good and no harm to those in his charge. To give no poison, to produce no abortion; to live a life of rigid morality, holding sacred the homes to which his profession admitted him, and not to talk about his patients' affairs, no matter how the information had reached him, whether in the course of professional attendance or outside of it.

One passage of the oath which constitutes a promise: "not to operate, not even for stone," has puzzled many a commentator, as the Hippocratic writings clearly show that Greek physicians did operate freely for many things, among them quite often to relieve patients of cystic calculi; there is little doubt that this passage was written in at a

later date. This interpolation occurred probably in medieval times, when medical practice had degenerated and its practitioners become so haughty that they would condescend to do no more than to indicate with the point of a wand the site for incision of an abscess, or the place for the opening of a vein. The dignity of the great man of the Middle Ages could not be degraded by manual labor; a barber or some other base-born attendant must do the actual work.

#### THE HERITAGE FROM GREEK MEDICINE

Out of the records left by the lay medicine of Greece have come two immortal things: one a philosophy, the other a portrait of the imagined Hippocrates; of the ideal physician. That philosophy is summed up in the magnificent first aphorism:

"The art is long; life is short. The opportune moment passes quickly. Experience is fallacious, decision is difficult. Not only must the physician be prepared to do his duty, but he must be able to make the patient, the attendants, the external circumstances conduce to the cure."

#### SINGER'S WORD PICTURE OF HIPPOCRATES

Of the portrait of the idealized Hippocrates, exemplar of what a true physician should be, no one ever has or probably ever will draw a more eloquent word picture than Charles Singer when he wrote that:

"The figure of Hippocrates—physician—has been of incalculable value to the medical profession in the twenty-three centuries that have passed since his death. Calm and effective, humane and observant, prompt and cautious, at once learned and willing to learn, eager alike to get and give knowledge, unmoved save by the fear lest his knowledge may fail to benefit others—both the sick and their servants the physicians—incorruptible and pure in mind and body, the figure of the greatest of physicians has gained, not lost, by time. In all ages he has been held by medical men in a reverence comparable only to that which has been felt toward the founders of the great religions by their followers."

University of California Medical School.

## CLINICAL NOTES AND CASE REPORTS

### BACILLUS PYOCYANEUS SEPTICEMIA\*

#### REPORT OF CASE

#### WITH UNUSUAL BLOOD FINDINGS

By JOHN MARTIN ASKEY, M. D.

Los Angeles

*BACILLUS pyocyaneus* has been reported frequently as the causative culprit in localized infections. Cases of septicemia are relatively few.

The tendency in both localized and blood stream infection toward a normal or low white cell count long has been recognized. Brill and Libman,<sup>1</sup> in reporting two cases of *Pyocyaneus bacillemia* in

\* Thanks are expressed to Dr. S. W. Imerman and Dr. Francis E. Browne for permission to report this case.



TABLE 1.—Blood Changes									
	(9-11)	9/12	9/25	9/26	9/27	9/28	9/30	9/30	10/4
Red Blood Cells (in millions)	3.9	HYSTERECTOMY	2.5	2.8	2.5	BLOOD TRANSFUSION	2.2	BLOOD TRANSFUSION	2.5
Hemoglobin	57		36	40	37		34		36
White Blood Cells (in thousands)	4.0		2.0	1.6	1.5		1.3		1.2
Lymphocytes	28		66	69	66		71		94
Polymorphonuclear Leukocytes	72		34	28	31		24		10

1899, remarked on the “absence of any leukocytosis,” despite a fulminating infection.

More recently *Bacillus pyocyaneus* has been found in the lesions of agranulocytic angina in several cases, but blood cultures when taken have been negative.

The relative paucity of reported cases of *Bacillus pyocyaneus* septicemia and the unusual blood findings prompt us to report the case outlined below.

REPORT OF CASE

The patient, age forty-two, had had menorrhagia for over a year. Between periods there had been a moderate but persistent malodorous discharge. The last three periods prior to admission had lasted over a week. Her average duration was always three to five days. There had been no associated cramps or pain.

Her one child, eight years old, had caused her no trouble at delivery. The past medical history was irrelevant.

Physically she was fairly well nourished, with color suggesting a moderate anemia. There were no relevant findings in the chest. The blood pressure was 100 systolic, 60 diastolic. The heart sounds were relatively weak but regular without murmurs.

Pelvic examination showed an eroded and cystic cervix. The uterus was enlarged and irregular, retroverted and not movable, apparently adherent.

On September 12 a total hysterectomy was done. Immediately after the operation, fever developed which continued until death; ranging from 100 to 105 degrees. On September 25 the white count was 2000, with 66 per cent lymphocytic cells. The leukopenia progressively increased until death, 1200 being the last count, with 90 per cent lymphocytes. The red cells dropped to 2.5 million, the hemoglobin was 36. Study of the blood smear revealed moderate variation in size and shape of the red cells. A marked reduction in platelets was observed and a determination of the bleeding time showed prolongation to twenty minutes. The clotting time was seven minutes, but there was no retractility of the clot after twenty-four hours.

Despite the thrombocytopenia and increased bleeding time, no purpuric spots, petechiae or other hemorrhagic manifestations appeared.

On October 3, a blood culture was positive for *Bacillus pyocyaneus*. Culture from the wound developed a growth of *Bacillus pyocyaneus*; also a bile soluble, Gram-positive diplococcus. Blood transfusions on September 28 and 30 failed to improve the patient. Mercurochrome, intravenously, on September 3 was futile. The patient died October 3, 1929. An autopsy was refused.

*Pathologic Report.*—1. Fibromyoma of uterus (infected). 2. Chronic proliferative endometritis. 3. Ulcer in cervix.

COMMENT

The site of action of the *Bacillus pyocyaneus* by which leukopenia is produced has not been determined definitely. Whether it be due to the direct depressant action of the bacterial toxin on the leukopoietic centers of the bone marrow, similar to that of arsenic poisoning, or to a destruction of circulating leukocytes in the peripheral blood, or both, has not been established. It is true a direct lytic action on white cells was demonstrated by Lovett<sup>2</sup> in her experiments on artificially produced exudates in guinea pigs. Conversely, however, the bone marrow of the patient reported showed an absence of active white centers. Other cases reported have shown similar aplasia. Lovett further produced a marked drop in the white cell count in the peripheral blood of the guinea pig by injection of cultures. Linthicum<sup>3</sup> corroborated this work and found that sublethal doses caused leukocytosis, and lethal doses leukopenia.

Although unsupported by necropsy findings, the clinical data in the above reported case, that of granulocytic leukopenia, thrombocytopenia, and a progressive anemia, point toward a toxic depression of the whole bone marrow, or beginning pancytopenia. The prolonged bleeding time and nonretractility of the clot are sequelae of the lowered platelet count. It is interesting to note that the patient showed no petechiae, purpuric spots, or other hemorrhagic lesions, despite these findings.

CONCLUSIONS

*Bacillus pyocyaneus* septicemia is capable of producing a marked granulocytic leukopenia with reduction of platelets and red blood cells. The site of action probably is in the bone marrow.

1930 Wilshire Blvd.

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# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

## POSTOPERATIVE TREATMENT FOLLOWING ABDOMINAL OPERATIONS

LE ROY BROOKS, SAN FRANCISCO.—In the light of advances in physiology of the gastro-intestinal tract and the practical contributions of biochemistry, postoperative treatment is coming more and more to occupy the position it has long merited. Proper postoperative treatment is begun by preoperative preparation of the patients. Except when emergencies exist, all patients should have rest in bed eighteen to twenty-four hours before operation, adequate supply of food, an abundance of carbohydrates in order that the liver may store up glycogen for the pending call, fluids plentifully for several days and *no cathartics*. When obstruction to hollow viscera exists, good judgment often dictates that the operation be done in two or more stages. Modern surgery does not admit of a multiplicity of major procedures at one sitting, regardless of the deftness of the surgeon.

The type of anesthetic administered also influences the convalescence. Nitrous oxid and oxygen supplemented by nerve block or local infiltration with  $\frac{1}{2}$  per cent novocain solution without adrenalin, is the present choice if great relaxation is not required. Ether may be added for relaxation, but is borne poorly by patients suffering from intestinal ileus, obstruction to the bile tract with hepatitis, starvation or prolonged general sepsis. This latter group of patients will be given a much better chance of recovery with spinal anesthesia with the small needles as advocated by Pitkin and others, and with attention to physiological details in controlling blood pressure. Finally, an a-traumatic technique is always imperative and consistent with finished and gentle work—the shorter the operation, the better for the patient.

Following any opening of the peritoneal cavity with a minimum of trauma, enough irritation to the peritoneum is produced to cause nature, to attempt to put the gastro-intestinal tract at rest. Therefore, nothing should be given by mouth for the first twenty-four hours—or better, forty-eight hours—after the simplest abdominal operation. If the patient has had sufficient amount of carbohydrates and fluids preoperatively, further fluids are not required in the average case for forty-eight hours. In an uncomplicated case, after thirty-six hours, tap water may be allowed by mouth in sparing quantities; fruit juices, etc., on the third or fourth day. If nausea occurs it usually means that fluids have been given too soon or in too large quantities, and all fluids by mouth should be immediately discontinued and, if vomiting persists, the stomach should be washed with sodium chloride solution. Giving chipped ice for the first few

days following an operation is mentioned here only to condemn it as it leads to more discomfort than relief to the patient. When enemata or colon flushes return liquid feces containing bile, then—and not until then—is the patient's gastro-intestinal tract ready for semisolid or solid foods. Morphine should be used to control pain, but not every three or four hours regardless of pain, and is not indicated when pain is due to distension.

If, however, the operation is done as an emergency, fluids may be furnished by injection of normal salt solution, both during the operation and for the required time afterwards. Glucose in 10 per cent solution may be injected intravenously if proper precautions are exercised. The 10 per cent glucose can be made up in normal salt solution if the solution is not heated after mixing and the added advantage of the sodium chlorid is secured. Five per cent glucose in normal salt solution may be injected subcutaneously or into the muscles of the outside of the thigh without fear of necrosis or more than the usual amount of irritation caused by normal salt. Normal salt solution may be given by rectal instillation or a rectal drip, but there is a difference of opinion as to the amount of glucose absorbed and utilized from such practice.

In peritonitis or intestinal obstruction often the stomach must be washed frequently and a life-saving procedure consists of passing a duodenal—or some other small tube—into the stomach and bringing the upper end through the nose, connecting it with other tubing which leads into a basin at the side of the bed. The patient may then drink water at will, which will, by siphonage, return through the tube and automatically wash the stomach. Doctor Ward has described an ingenious tube for this purpose with a Connell suction principle, but if such a tube is not available, a Rehfus tube is adequate. From 3000 to 5000 cubic centimeters of glucose and salt solution must be injected daily to meet the tissue and blood chemistry requirements in these cases until the intestinal tract resumes its function. There is a tendency in such patients to develop acidosis or alkalosis, retention of urea and nonprotein nitrogen, a hypochloremia and dehydration. Fortunately all of these indications may be properly met by the injection of a sufficient quantity of glucose and normal or 2 per cent salt solution. These solutions may be injected subcutaneously, intramuscularly and intravenously, and it is desirable, but not obligatory, to have reports from the blood chemistry laboratory to give the solutions.

The time for the removal of drains depends upon the type of case. If drainage is direct and the abscess is not far removed from the surface



with large enough external opening not to interfere with the escape of pus and débris, the drain should be removed not later than the third or fourth day. Drains in nonlocalized peritonitis are of questionable value, and if used at all should be removed at the end of twelve to twenty-four hours. Undressed hard rubber tubes should not be used as drains because they cause hemorrhage and intestinal fistulae from pressure necrosis. As a general rule the tendency in regard to drainage in peritonitis is to leave the drains within the peritoneal cavity too long, rather than to take them out too soon.

If silkworm gut tension stitches are used the deep layers of a suppurating wound may slough and separate and the pressure upon these stitches by the bulging distended intestine will lead to pressure necrosis and intestinal fistula. All such stitches, if used, should be removed within the first few days when infection exists. The wound may be held together by adhesive.

Secondary abscesses within the peritoneal cavity rarely develop and will often break into the drainage channel or can be reached with a curved Mayo hemostat without the necessity of a second operation if the surgeon does not become impatient. The exception to this is extremely rare.

Abdominal distension in peritonitis is distressing to both patient and surgeon and the latter may get panicky and give irritating enemata, pituitrin, spinal anesthesia, etc., in an attempt to get relief. He may obtain temporary relief, but will find his patient in a worse condition a few hours later because of having stirred up the sick intestines. In peritonitis if the distension cannot be relieved by colon flushes, mild enemata and hot compresses to the abdomen, the more drastic measures are not indicated. These patients occasionally present a duplex obstruction—one in the sigmoid and the other in the small intestine, when the bowels are adherent together in the pelvis. When this occurs, a simple jejunostomy done early under local anesthesia in the patient's bed will drain the upper small intestine, but the patient may succumb to the second obstruction unless a cecostomy is done to drain the lower loops of small intestine and the colon.

These remarks are concluded with an appeal for rest of the gastro-intestinal tract to aid the natural processes of repair following abdominal surgery.

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THOMAS O. BURGER, SAN DIEGO.—Doctor Brook's article seems to call for the old stereotyped beginning of a discussion, namely, "I want to approve most heartily of all the doctor has said, and only wish to emphasize the points he has made in his discussion."

He has very properly started the discussion of postoperative complications or conditions by beginning with preoperative preparation, which is now admitted to be the greatest benefit we have toward preventing postoperative distress or complications.

There is no question but that the improved conditions and the preparatory treatment at the

present time, or, you might say the lack of it, has had a great deal to do with helping to keep the physiological function of the gastro-intestinal tract in a better or worse condition for surgical onslaught.

The other emphasis I should like to mention is the use of spinal anesthesia, which has been found to be, more than any other single procedure, the greatest blessing to the patient following abdominal surgery. We have found during the past few years that it lessens the discomfort, the pain, and the various complications following abdominal operations. It means that nontraumatic procedures to the abdominal contents can be carried out as they have never been done before with a general anesthesia. There is less gas, less possibility of ileus, fewer adhesions in the future, and many other features that might be noted.

I am also and have been making for quite a few years an effort to lessen the disaster of embolus, which is an ever-present danger, and I have carried out the procedure to some extent that Walters has been having good results with, and regarding which he has recently written a number of articles, *i. e.*, keeping the blood pressure up and preventing stagnating blood currents by improving the force and activity of the circulation by the moving of the body, particularly the limbs at frequent intervals. Also keeping up the circulation if necessary by giving ephedrin occasionally, and possibly by giving a full tolerance of thyroid extract, and doing everything that is possible to keep the circulation active.

We do not put adhesive or tight binders about the upper abdomen which may interfere with free and full respiration, and insist that the nurse make the patient breathe fully at very frequent intervals. This also probably helps to prevent occasional atelectasis.

A small point that we insist upon (which makes the patient and some of the profession smile) is that all postoperative patients regularly chew gum. We believe that it has a benefit in keeping the mouth in a better condition. Patients swallow the saliva and a slight amount of secretion. It is not an objectionable feature, and we believe particularly that it will have a beneficial effect in preventing that occasional and distressing complication, namely, parotiditis.

We do not give purgatives following surgery; but as soon as the patient will tolerate it, generally the second or third day, we administer large doses of paraffin oil or some of the combinations of paraffin oil. We believe the oil aids in establishing a quicker physiologic function of the bowel by lubrication.

I think that morphin is a godsend to the majority of these patients, but its use should not be abused. If a sufficient amount is given, I do not believe that any serious injury results.

Hiccough is a distressing condition, particularly so following semi-infectious or peritonitis cases. For this there are many treatments used, but we have found the most effective method for the control of this distressing condition to be the inhalation of carbon dioxid gas.



Too little attention has been given in the past to those increasing numbers of patients who unnecessarily complain of "adhesions" as a cause for their numerous and varied complaints which develop postoperatively.

Proper coöperation on the part of the surgeon and internist in treatment, both physical and in the restitution of normal physiologic functions, will certainly do much toward eliminating this complaint, or at least it will keep many of those seeking relief from this complaint out of the hands of quacks.

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GEORGE H. SANDERSON, STOCKTON.—Doctor Brooks' paper presents a brief review of postoperative treatment following abdominal operations which embodies a most modern viewpoint and a most rational method. In discussing it, I can only emphasize certain points, and add but little.

Postoperative treatment to be rational must be simple—I can see no need of too complicated or too stereotyped a regime. Rest is the keynote in the treatment, and disturbing elements should be as easily and simply combated as possible in order that the keynote may be struck and maintained. A patient has often about all the treatment he can stand on the operating table—he should therefore not be overtreated postoperatively, and especially during the first few days should be disturbed as little as possible.

I am giving morphin in much smaller doses than formerly, and find that the tolerance of different individuals for this drug varies enormously—the only safe way, then, is to use small doses first and then increase if necessary. Very often the preoperative hypodermic may be omitted entirely.

I have gotten used to digitalizing patients before goiter operations, and I think this could also be done more in abdominal surgery than it is. It would be an advantage, especially in the flabby-obese, biliary and pancreatic cases, who often have a myocardial impairment which stands the operation but which is a factor in postoperative distension and complications dependent in part on circulation, such as pneumonia and embolism. If there has been no opportunity to do this preoperatively, a dram of the tincture may be given by rectum in four ounces of tap water just following operation.

Both dehydration and alkalosis are best combated by the administration of salt solution either by hypodermoclysis or intravenously, and where much blood is lost, this is best done on the table during the anesthetic. When done afterwards it disturbs the patient both physically and psychically to some extent, although this should not discourage its use where it is really necessary. Except in operations on the stomach or duodenum, I can see no objection after a few hours in giving small amounts of water by mouth when it is tolerated, but it should not be either hot or cold. At moderate temperatures, it does not seem to cause peristalsis, and is rapidly absorbed if the stomach is not upset. The Murphy drip method is

irritating to many patients and interferes with their rest. Normal salt solution may be given by rectum as a retention enema of four to six ounces every few hours with very little disturbance to the patient.

Where there is any tendency to gastric dilatation, lavage should be performed, and in extreme cases, continuous drainage, as advocated by Dr. Robertson Ward. Gas enemas and pituitrin should be used only rarely, but are effective occasionally in selected cases. More often the rectal tube alone will suffice.

Drains should be soft, and used only when definitely indicated. If intended to remove postoperative blood or tissue fluid oozing, they should be removed in from twenty-four to forty-eight hours. If there is positive infection, they often save the incision from breaking down, and less frequently actually drain any considerable amount of pus from the depths of the peritoneal cavity where it usually occurs. Where there is doubt, the drain may be removed slowly, a small piece being cut off once a day until the whole drain is removed. The majority of even badly infected cases will get along without any drainage at all, but a safety-valve is certainly more of a boon than a menace.

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Another Experiment in Middle-Class Medical Care. In February 1930, the trustees of the Massachusetts General Hospital will open a new unit called the Baker Memorial. The Rosenwald Fund Committee has agreed to underwrite one-half of the deficit in operation of this hospital during its first three years up to a maximum of \$150,000, with the understanding that the deficit will not exceed \$75,000 in any one year. The Baker Memorial has been designed for the care of sick people of moderate means. It is pointed out in the Massachusetts General Hospital News that the care of the sick in this unit will include voluntary curtailment of the physicians' fees so that those entering the institution will pay a maximum fee of \$150 for any illness or operative care and that the maximum fee for uncomplicated obstetric service and hospital care will be \$100. Only members of the staff of the Massachusetts General Hospital and of the Charitable Eye and Ear Infirmary and the obstetric staff will be permitted to practice in this institution. This hospital has been definitely planned and constructed, and is to be quite definitely operated, as a middle-class institution. The employment of special nurses will be discouraged. Ward maids, nurses' helpers, and floor clerks will be utilized so that nurses will devote all their time to actual bedside nursing. A special social service department will control the class of patients to be admitted. The institution will have 333 beds, part of which will be used at first for the interns and nurses, since special buildings for this purpose have not yet been provided. There are to be eighty-eight beds in single rooms, twenty-four beds in two-bed wards, twenty-eight beds in four-bed wards, and eighteen beds in cubicles. For obstetric patients there will be twelve beds in single rooms, six beds in two-bed wards, and eight beds in four-bed wards. Private rooms will cost \$6 a day, cubicle beds \$4 a day, and the two-bed and four-bed wards will vary between these figures. Nursing, food, and ordinary drugs are included in this price. Special fees will be charged for laboratory work and for roentgen-ray work. It will be interesting to see whether this experiment can operate successfully and pay its own way. The fees are not apparently much greater or much less than those charged today in most of the hospitals in the United States.—*Journal of the American Medical Association*.



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Editors . . . . . { GEORGE H. KRESS  
EMMA W. POPE

Associate Editor for Nevada . . . HORACE J. BROWN

Associate Editor for Utah . . . . . J. U. GIESY

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# EDITORIALS

## THE DEL MONTE "PRE-CONVENTION BULLETIN"—COMMENTS ON SOME OF ITS SUGGESTIONS

*Volume One of the California Medical Association Pre-Convention Bulletin.*—Last year, at San Diego, the House of Delegates revised the constitution of the California Medical Association and among other things provided for a *Pre-Convention Bulletin*, to be printed and distributed to members of the House of Delegates at each annual session. The reports and suggestions of the officers and committees which are printed therein open up vistas of many alluring fields of medical organization work.

The members of the House of Delegates, when the Fifty-ninth Annual Session of the California Medical Association convenes at Del Monte, will have opportunity to study and take such action on these various reports and recommendations as in their judgment may be deemed best. What that action will be we are not in a position to forecast, but whatever it is, the instructions will be carried out by the administrative officers of the Association. What is here written, before the House of Delegates convenes, is intended only as a running or an informal comment so that the many members of the Association who will not be able to attend the Del Monte meeting and who will not receive copies of the *Pre-Convention Bulletin* may have an opportunity to know somewhat of some of the matters which will be brought before the House of Delegates. Full

reports of the proceedings of the House of Delegates will be printed in the June issue of CALIFORNIA AND WESTERN MEDICINE.

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*Reports of General Officers.*—The annual address of President Morton R. Gibbons is printed in this issue of CALIFORNIA AND WESTERN MEDICINE and is commended to the consideration of all who wish to be alert to modern day trends in medical practice. His address is worthy of perusal and serious thought by every member of the California Medical Association.

The *Report of the Council* took up topics such as the funds of the Association, its incorporation, the new constitution and by-laws, the clinical and research prizes, membership, and the Woman's Auxiliary.

The *Report of Secretary Pope* discussed several organization and membership problems and was also given in more detail in verbal form.

The *Report of Editors Kress and Pope* contained the interesting statement that CALIFORNIA AND WESTERN MEDICINE, through its increase in advertising rates, had added to its income resources something over \$6000 in the year just closed, and that the journal now had an income sufficient to meet its expenses.

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*Reports of individual district councilors* indicated continued progress in the nine geographical districts into which the Association is divided.

As yet no District Association has come into existence. It will be interesting to note how long California will refrain from organizing such district societies which in other states of the Union have been found to be efficient elements in better organization.

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*The Value of Standing Committees.*—Of special interest were the reports of the standing committees, which committees came into existence when the new constitution and by-laws were adopted.

Through such committees the various activities having to do with scientific and organized medicine are under more or less constant consideration by workers in the Association, contact being maintained with the central administrative body of the Association by the placement of one counselor on each such committee. In this manner individual committees are able to pursue their investigations and studies of problems within their respective domains and present their viewpoints and recommendations to the Council for further consideration. The value of having such standing committees is evidenced in the reports submitted by them. These first standing committees were all appointed after the close of the San Diego session, so that, with the exception of one or two committees, most of the exchange of opinion between members had to be by letter instead of through personal conference.

*Reports of Individual Committees.*—The *Committee on Associated Societies* reported that seven county woman's auxiliaries had been organized.



the Los Angeles County auxiliary reporting a paid-up membership in excess of four hundred.

The value of coöperation with the medical and dental professions in securing the passage of a "basic science" or "qualifying certificate" act was also mentioned.

The desirability of having the California Medical Association appoint fraternal delegates to attend the annual sessions of neighboring state medical societies, such as Nevada, Utah, Oregon, Washington, Arizona, and New Mexico, and so aiding in the promotion of kindly sectional outlook, was also suggested.

The *Committee on Extension Lectures* made mention of the desirability of keeping the central office of the Association and the committee in touch with the expected visits of prominent members of the medical profession of our own and foreign countries, in order that different county associations in California might avail themselves, if possible, of addresses by such prominent visiting colleagues.

The *Committee on Health and Public Instruction* commented briefly on radio health talks, newspaper health columns, and among other items suggested the value to be derived by having short items on health matters which could be printed on the wrappers used by drug stores.

The *Committee on History and Obituaries* reported that in our State Association membership of 4854, there had been a total of eighty-one deaths during the preceding year.

This committee also recommended that every county society make an effort to begin the compilation of a history of its unit, and that the California Medical Association also make an effort to compile such a history of its own past.

The *Committee on Hospitals, Dispensaries, and Clinics*, through its *Subcommittee on Clinics*, gave in considerable detail an analysis of the clinic situation existing at this time in California. The report is worthy of perusal by every member of the California Medical Association. Some of the figures presented cannot be other than be a surprise to most of the members of the California Medical Association. The survey thus far made is only a beginning and indicates how large a field for further work and study lies in a consideration of these clinic and dispensary problems.

The *Committee on Medical Economics* presented a digest of some of the studies which it had made in connection with the tentative plans to give better medical and surgical care to citizens of moderate financial resources. Here also a large amount of work was done by certain committee members and the facts and figures presented are worthy of the careful thought and consideration of all members of the California Medical Association. The studies thus far made indicate the great scope of these problems and how necessary it is that adequate knowledge should be had of these matters.

The *Committee on Medical Defense* presented a short report which also should be read by all members of the Association. A malpractice suit

usually comes out of a clear sky. When it does come it makes a tremendous difference if protection has been previously obtained. The benefits of the coverage known as "Optional Defense," as carried out through the California Medical Association, are explained. Any members wishing additional information can obtain the same through the central office of the Association. If you do not carry such insurance, you are urged to send in a letter asking for more information.

The *Committee on Membership and Organization* again called attention to the figures showing a total number of California licentiates who had M. D. degrees (8974); and that of these licentiates, 4854 were members of the California Medical Association and 5840 were nonmembers. The importance and desirability of each county unit making a careful survey of nonmembers in its county, to the end of securing affiliation of those physicians in such groups who were eligible and desirable as members, was stressed.

The *Committee on Publications* made several suggestions of additions to the annual directory, such as the code of ethics, digest of malpractice laws, and Woman's Auxiliary information.

The *Committee on Public Policy and Legislation*, which has always been one of the hard-working committees, brought in a report on some of its work, emphasizing the necessity of all members of the Association being alert in the forthcoming primary and final elections, so that only candidates in favor of proper protection of the public health would receive the support of members of the medical profession.

The *Committee on Scientific Work* submitted as its report the scientific program of the Del Monte session, as printed in the April issue of CALIFORNIA AND WESTERN MEDICINE. Members of the Association were urged to send in suggestions and constructive criticisms so that members of the committee might be able to eliminate undesirable features and to make desirable changes.

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*Report of Special Committees.*—The last of the committee reports included in the *Pre-Convention Bulletin* was that of a special committee—the *Special Committee on Revision of the Medical Practice Act and of a Possible Basic Science Act*. The report recommended no changes in the Medical Practice Act as now existing in California other than to insert a provision that would give graduates of California medical schools the same advantages as those of eastern schools who sought licensure in California.

The important matter of a possible basic science act was considered, in connection with two drafts, one of which was submitted by the Southern California subgroup and the other by the secretary of the California Board of Medical Examiners. The value of calling such a "basic science" act by the name "qualifying certificate" act was pointed out, especially if such nonmedical subjects as English, physics, chemistry, and biology were decided upon as the preferable subjects for such "qualifying certificates."



*"Pre-Convention Bulletin" a Desirable Innovation.*—As stated at the outset of these comments, these various reports will be submitted to the House of Delegates to be referred to its proper committees and then acted upon by the House. The report of the proceedings of the House of Delegates will appear in next month's issue of CALIFORNIA AND WESTERN MEDICINE. It is our impression that the members of the House of Delegates, after this first experience with such a printed outline and survey of past and future work, will look with favor on this *Pre-Convention Bulletin*.

#### WILLIAM HENRY WELCH

*The Eightieth Birthday of William H. Welch of Johns Hopkins.*—William H. Welch, whose eightieth birthday occurred on April 8, was honored in many cities throughout the country by meetings held in his honor. These meetings were an expression of the high regard in which are held the contributions which he had made to scientific medicine and to humanity in the many years it has been his privilege to serve at the shrine of the healing art. Where formal meetings were not held, members of the profession who were aware of the celebration of his natal day gave him silent good wishes, in their pride at his notable achievements on behalf of modern scientific medicine.

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*The Life and Work of Doctor Welch an Inspiration.*—Both the lay world and the medical profession have reasons to be grateful for the existence of men like Doctor Welch. Modest, gracious, hard-working, clear-thinking—with vision and devotion he has carried on his work from the time bacteriology first came into real being through the researches of Pasteur, bringing forth from his laboratories from time to time, this, that or the other study on some medical problem, which would make it possible for his colleagues to do to better advantage their work in the conservation of human health and life.

Even at the age of eighty, he is still an active force in medical advancement, as witness the institution of the new department of the history of medicine which, largely through his urging and efforts, has been organized at Johns Hopkins University.

That he may live for many days to come, to see the further fruition of his past efforts and to receive the esteem and honor in which he is held by his colleagues from one end of the country to the other, is the wish not only of those who have had the privilege of working under him or of personally knowing him, but also of that great host of medical men who give him their meed of praise and recognition because, through the literature, they have learned to appreciate his splendid services to the medical profession and to the human family. His life is an inspiration to every medical man or woman desirous of performing real service.

#### EPIDEMIC CEREBROSPINAL FEVER

*Recent Articles in California and Western Medicine.*—Among the special articles of this issue is an article on epidemic cerebrospinal fever on the Pacific Coast by Dr. J. D. Geiger, who is the epidemiologist for the Hooper Foundation of the University of California. In the Miscellany department, in the "Clippings From the Lay Press" column, is reprinted a Washington dispatch concerning cerebrospinal meningitis, based on recent reports of the United States Public Health Service. A very interesting article, giving a report by Dr. Barnet E. Bonar on seventy-one Utah cases, was also printed in the November issue of CALIFORNIA AND WESTERN MEDICINE, page 316. The attention of readers of this journal is called to these articles, not only because of their general public health importance, but because the sequelae of this disease so often are little less than tragic.

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*Outbreaks Aboard Ship.*—Of special interest to Californians are the facts brought out by Doctor Geiger concerning epidemics on Pacific Ocean ships which dock at ports on the west coast of the United States. The recurring outbreaks aboard certain ships trading with the Orient indicate how rigid must be the port quarantines if infected persons are to be kept from shore entrance to Pacific Coast states. Lack of such stringent quarantine regulations might make possible the entrance of one or more infected persons or carriers, with possibilities of untold horror to those who might subsequently become infected.

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*Report Suspicious Cases to Health Departments.*—Cerebrospinal fever is one of the diseases which menace human health and happiness, and life as well, and all practitioners should be on the alert to recognize the disease when and wherever met. Suspicious cases should be promptly reported to local and to state health officers.

#### BACK TO NATURE FOR DISCOVERIES IN SCIENCE

*"There Is Nothing New Under the Sun."*—Certainly when one considers the universe—insofar as our feeble vision will permit—and to think of the earthly planet on which we human beings have our existence, and to note the infallible and never-varying laws under which nature guides it and all things upon it, we cannot do other than to acknowledge—as we note the phenomena evidenced in the mineral, plant and animal kingdoms—that probably nothing that man has or will discover in relation to physical forces but has had an application in nature for ages and ages past, in manner manifold and almost beyond the comprehension of most humans.

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*An Interesting Contribution From Peru on Wound Care.*—The general observations, as just given, come to us as we consider a newspaper clipping of a few days ago. The item had to do with a recent report by the Field Museum of

Natural History of Chicago, in which Llewellyn Williams, leader of the Peruvian expedition into the Amazon country, tells how the Peruvian Indians long antedated the use of metal suture clips brought out a few years ago, by using the powerful jaws of certain ants to hold opposing wound surfaces in proper apposition. More concerning this will be found in the "Clippings From the Lay Press" column of this issue.

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The foregoing shows at least that even though one may have an unusual fund of general or special knowledge and skill that it is wise to go through life in quite humble spirit. That which appears as a strange theory or idle fancy today, in the light of better knowledge not infrequently is found on the morrow to be either a veritable fact or based on such.

#### **CALIFORNIA ACQUIRES TWO FOUNDATIONS FOR CANCER RESEARCH—THE FIRST AT LOS ANGELES AND THE SECOND AT SAN FRANCISCO**

Two foundations, or organizations, for the study of cancer and kindred problems were announced at the Fifty-ninth Annual Session of the California Medical Association held at Del Monte April 28 to May 1. The announcement of this expression of confidence by lay fellow citizens in the work of members of the medical profession who were carrying on cancer studies was received with much approval. In the name of the California Medical Association, the House of Delegates at its meeting on Wednesday, April 30, passed resolutions congratulating the donors whose contributions made these benefactions possible and expressing good wishes to the two California colleagues, Dr. Walter B. Coffey and John D. Humber, whose experimental studies on cancer excited such widespread interest in the cancer problem because of the publicity which lay newspapers and publications gave to the cancer clinics established after their paper had been presented before the San Francisco Pathological Society. The comments made in this column in the March 1930 issue of CALIFORNIA AND WESTERN MEDICINE, page 190, told the story of that presentation, and it is not necessary to repeat what was there stated other than to add that through the clinics in San Francisco, Los Angeles, and other places in California, a total of almost two thousand inoperable patients are now receiving injections of the Coffey-Humber suprarenal cortex extract. Practically all of these patients who request treatment, prior to receiving the injections, without cost or fee, state their willingness to have autopsies performed in the event of death. California, therefore, through the wide publicity given by the lay press, overnight has developed what are probably the largest cancer clinics in the entire world.

The first gift for the further promotion of these cancer studies was made at Los Angeles, through the generosity of W. K. Kellogg of Battle Creek, Michigan and Pomona, California, who set aside the sum of \$2,000,000. The income

is to be used through the Kellogg Foundation, the experiments to be carried on by the White Memorial Hospital of the College of Medical Evangelists.

The second donation was made by a group of well-known Californians headed by Herbert Fleishhacker, Paul Shoup, Stanley Dollar, and other citizens who underwrote a subscription for the sum of \$500,000 to be used in this and associated research work.

California as a whole may well feel proud of these public-spirited citizens who have thus given expression of their love of their fellows and their regard and faith in Doctors Coffey and Humber and of the medical profession.

The resolutions which were unanimously adopted by the House of Delegates read as follows:

Whereas, The dread scourge of cancer, in an ever-mounting toll, is decimating the population of our country so that today its dire death roll accounts for the life, in those of forty years of age and upward, of one woman out of every eight and one man out of approximately every twelve, thus making it a sacred duty incumbent upon all members of our beloved profession to combat its ravages with every arrow in the armamentarium of the science and skill at our command, and to shrink from no sacrifice, however great, in order to halt its forward march and bring to an end its almost unveiled threat to annihilate mankind; and

Whereas, Many agencies and investigators are making researches designed to add to man's knowledge of this disease which causes so much illness, pain, death, and other loss to individual citizens and to the nation; and

Whereas, Some recent studies by two members of the California Medical Association, Dr. Walter B. Coffey and Dr. John D. Humber, are, in the opinion of many of the leaders of our profession who have had the opportunity to observe this work, of such nature as to give aid in the solution of the cancer problem; and which work and investigations of our California colleagues are, as stated by them, and will remain for some time in the research period, and no scientific or definite pronouncement can or should now be made of the results thereof; and

Whereas, In the city of San Francisco Herbert Fleishhacker, Paul Shoup, and Stanley Dollar, acting for themselves and for other public-spirited citizens, have arranged to place the sum of \$500,000 at the disposal of the Better Health Foundation of California to carry on these investigations and kindred studies; and in the city of Los Angeles W. K. Kellogg has given the Kellogg Foundation the income from an endowment of \$2,000,000 for similar purposes; and

Whereas, This Association, by its constitution and membership, is irrevocably committed to the principles of the progress of medical science and the unprejudiced pursuit of truth and fact; now, therefore, be it

Resolved, That the California Medical Association, acting through its House of Delegates in its fifty-ninth annual session assembled at Del Monte, cordially approves and commends this generous and humane action of Paul Shoup, Herbert Fleishhacker, Stanley Dollar and their associates, and W. K. Kellogg that affords the necessary means, administered by competent authority, to enable the investigations to properly proceed, adds greatly to the resources of scientific research in the State of California and encourages others to emulate the good deeds of these men; and be it further

Resolved, That a copy of this resolution be sent to each of the donors with a suitable letter of transmittal by this Association.



# MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

## Syphilology

**Modern Advances in the Therapy of Syphilis.**—On August 23, 1929, Dr. Jay Frank Schamberg, professor of dermatology and syphilology at the University of Pennsylvania, spoke before the Alameda County Medical Society on "Modern Advances in the Therapy of Syphilis."

The main theme of his address was a plea for conservatism in the dosage of the antisymphilitic drugs. Instead of the formerly used maximum dose of .9 gram neoarsphenamin, he urged that the maximum dose of this drug be .6 of a gram. To offset the lower therapeutic efficiency of this smaller dose, he advocated the concomitant administration of small doses of bismuth.

Of the arsenicals, he favored neoarsphenamin instead of arsphenamin because of the fact that it is the less toxic and because it is better borne by the patient when given over the long periods of time required by the modern treatment of syphilis. He recognized that arsphenamin is therapeutically slightly more active than neoarsphenamin, but felt that this could be offset by giving a few more injections of neoarsphenamin in a series; for instance, eight injections of neoarsphenamin would be comparable with six injections of old arsphenamin.

In his opinion the failure of certain investigators to obtain results with neoarsphenamin was due to their use of inferior brands; it being well known that various batches of neoarsphenamin are subject to greater variations therapeutically than the older product. To eliminate this difficulty only brands of proved value should be used. Doctor Schamberg urged that the United States Public Health Service or some similar agency test all lots of the arsenicals for their therapeutic activity (therapeutic index) as well as for their toxicity which latter is the only test made at present.

He believed that the use of bismuth was a great step forward, his choice being potassium bismuth tartrate. It should be used along with the arsphenamins in early syphilis and, when thus given, the dosage should be conservative, say one-tenth of a gram per week. Work done by Wright in his clinic made him feel that it was of especial value in congenital syphilis; also in those cases where the Wassermann had remained persistently positive in spite of treatment with the arsphenamins and mercury.

This class of patients, *i. e.*, the Wassermann-fast group, should be investigated most thoroughly in regard to the condition of their cardiovascular and central nervous systems. X-rays of

the aortic arch and spinal fluid examinations are imperative. He had found that this group reacted best to silver arsphenamin.

He would not abandon mercury, although he felt that it was inferior to bismuth. It is desirable to have several drugs with which to attack the spirochetes. Courses of bismuth and mercury can be alternated with courses of the arsphenamins, thus attacking the spirochetes through different chemoreceptors.

In his opinion, the iodids were of less importance than they were prior to the advent of the arsphenamins. However, they are of distinct value in late gummatous lesions, especially when treatment with bismuth and mercury is also used. In certain phases of neurosyphilis, iodids are valuable.

He reviewed his experiments on rabbits in which he demonstrated that hot baths would prevent and would cure experimental rabbit syphilis. Reasoning from these results, he felt that the application of hot baths in human syphilis should be studied further.

He spoke of the value of malarial inoculation in the treatment of paresis and expressed the view that paresis was no longer a hopeless condition in view of the new treatment that had been introduced. At least one-third of the cases are improved to such an extent that the patients are able to leave institutions and return to work.

H. J. TEMPLETON, Oakland.

## Esophagoscopy

**Radon in Cancer of the Esophagus.**—Up to the present time the mortality from cancer of the esophagus has been 100 per cent. Experience has shown that surgical removal of the growth has invariably ended in death. Radium has been tried but, for obvious reasons, found wanting.

In recent months English workers have introduced the use of radon seeds in treatment of esophageal cancer. It seems to be based on logical foundation and merits serious consideration.

F. J. Cleminson<sup>1</sup> reported four cases of esophageal carcinoma in whom artificial pneumothorax was performed, and a week or ten days later followed with thoracotomy and implantation of radon seeds of various strength in front, behind, and at the proximal side of the growth on which the chest was opened. The distal side was treated by means of radon seeds strapped to the Souttars tube and introduced by means of esophagoscopy.

Musgrave Woodman<sup>2</sup> has treated some thirty-five cases of cancer of the gut by implantation of radon seeds into the growth through the esophag-

oscope. He considers the para-esophageal route too serious a risk to take, particularly in those who have advanced lesions and whose vitality is already greatly reduced.

As might be expected, the method is still in a stage of development. Much work must be done before it even approximates finality. But with improved technique, coupled with early recognition of the presence of the disease, the judicious use of radon in the skilled hand offers a hope of effecting a resolution of the growth in at least a few instances.

H. J. HARA,  
Los Angeles.

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#### Bacteriology

**Paradoxical Culture Media.**—The observation of Mesnil during the closing years of the nineteenth century that pathogenic microorganisms multiply in the serum of animals artificially immunized against these microorganisms, and the later demonstration by Bridré and Jouan (1914) that the microorganisms not only multiply but proliferate at an accelerated rate in such specific antisera, were paradoxical to nineteenth century orthodox immunology, which assumed that all serum "antibodies" are of necessity purposeful specific defensive or antiseptic substances. Current immunology, however, which assigns no *necessary* defensive or antiseptic function to such humoral colloids,<sup>1</sup> which regards the basic mechanism of acquired antimicrobial immunity as still beyond the horizon of adequate biochemical hypotheses, finds no paradox in such alleged specific growth stimulation.

Emboldened by these newer immunologic concepts, Nicolle and Césari<sup>2</sup> of the Pasteur Institute, Paris, have recently extended the currently forgotten historic observation to a wide variety of pathogenic microorganisms. They report such a marked growth stimulation with specific antisera as to lead them to suggest the employment of such immunesera as the routine culture medium of choice for pathogenic microorganisms. They believe that the employment of such specific growth stimulants may in time lead to the test-tube cultivation of filterable viruses and to the preparation of successful vaccines with many microorganisms "thus far unculturable."

W. H. MANWARING, Stanford University.

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2. Nicolle, M., and Césari, E.: Influence des Immunsérums Spécifiques Sur la Culture des Microbes Pathogènes, Annales de l'Institut Pasteur, 40, 41, January 1926.

#### Surgery

**Sodium Amytal in Thyroid Surgery.**—The surgery of the thyroid gland presents many unique problems. Among them not the least to be reckoned with is the choice of the anesthetic. In the majority of toxic cases the threshold of safety for surgical attack is greatly reduced both by the conditions inherent in the malady itself, as well as by the secondary pathology affecting the vital organs. Imbalance of the emotional centers, abnormal reaction to the stimuli received through the special senses, render the sights and sounds of the operating room peculiarly hazardous to the hyperthyroid patient.

Sodium amytal promises much toward safeguarding these patients. By its use, intravenously, a profound and apparently normal sleep is promptly induced and the patient comes to the surgical ordeal unconscious, relaxed, and with pulse and heart action unchanged. If the supplementary anesthetic is carefully chosen and administered and due gentleness employed in all manipulations, it is not at all unusual to find pulse and general condition as favorable at the end as at the beginning of the operation.

This new agent is not an analgesic. It is most important that this fact be clearly understood by those who would employ it. True, a few have reported success with it alone in a variety of operations. But within the limits of safe dosage such result is not to be anticipated or sought.

The writer has employed it in a series of thyroidectomies during the past year, both with general and with local anesthesia, and feels justified in stating that it is a valuable addition to our armamentarium. Particularly is this true in the type of case in which it is desirable to use local anesthesia. It should be stressed in this connection, however, that a satisfactory result is even more dependent upon the care and skill which characterize the local anesthesia technique than when the latter alone is employed, since the co-operation of the unconscious patient cannot be enlisted.

Sodium amytal is put up in ampoules of one cubic centimeter. This is the ordinary dose. It is used only intravenously, and the patient falls into sound sleep *while it is being administered*. In the writer's personal experience, no disturbance of heart action, blood pressure, or other untoward effect has been observed.

A. B. COOKE, Los Angeles.

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What are the attractions of a career in life? They lie, do they not, in the opportunities the career offers for service to mankind, in the congeniality of the work and in its rewards. The profession of medicine surpasses all others in its opportunities for service to our fellow men. Besides this there are manifold fields of activity, appealing to the most varied personal inclinations and aptitudes, be these practical or scientific. The rewards of success in medicine, even of the highest success, lie not in money; they lie in the intellectual pleasure which one gets from his work as a physician, in the consciousness of service, in the relief of suffering, and in the cure and prevention of disease.—*William Henry Welch of Baltimore.*



# STATE MEDICAL ASSOCIATIONS

## CALIFORNIA MEDICAL ASSOCIATION\*

MORTON R. GIBBONS.....President  
LYELL C. KINNEY.....President-Elect  
EMMA W. POPE.....Secretary

### COMPONENT COUNTY SOCIETIES

#### ALAMEDA COUNTY

The regular meeting of the Alameda County Medical Association which was held at Hunter Hall on March 17 was devoted entirely to the subject of medical economics. Dr. Daniel Crosby, the chief speaker of the evening, spoke with the authority of information amassed from innumerable sources both in this country and in Europe. The doctor painted a clear and concise picture of the situation as it actually exists in the principal countries of Europe as well as in various parts of the United States. In closing the discussion Doctor Crosby offered a motion that the president appoint a committee to continue the work of investigation and after mature study to map out a plan or plans for betterment of the existing condition. General discussion was opened by Dr. O. D. Hamlin, who told of some of the plans of the California Medical Association in regard to this matter. The president then appointed Doctor Crosby as chairman of a committee to be selected.

GERTRUDE MOORE, *Secretary*.

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#### CONTRA COSTA COUNTY

The Contra Costa County Medical Society met at the nurses' home of the County Hospital at Martinez on April 8.

Dr. O. D. Hamlin of Oakland, councilor of the California Medical Association for this district, paid us an official visit. Doctor Hamlin presented a survey of the work being done on the cost of medical care. He discussed the economic situation of the physicians in various counties, and showed how irregular practices are carried out in certain county hospitals, to the detriment of the medical profession as a whole and the individual practitioner in particular. The various remedies proposed to lower the medical cost to the patient were described. The speaker explained the plan which the State Association has been considering for some time in the solution of this vital economic problem. Doctor Hamlin's talk brought out much instructive discussion.

The scientific paper was presented by Dr. Eugene S. Kilgore of San Francisco, who spoke on "The Practical Assessment of Cardiac Condition." The speaker explained how the practical interpretation of the clinical signs and symptoms of heart disease will guide the prognosis of the case. Particular emphasis was laid on the value of careful and detailed history in these cases. The estimate of what a heart can stand and its future possibilities depends on stability and integrity of the myocardium. Doctor Kilgore illustrated by well-chosen cases the common pitfalls of erroneous prognosis in the diseased heart. A concise but thorough differential diagnosis between coronary block and angina pectoris was presented. Vari-

ous types of pain in heart disease were interpreted by the speaker. The practical value of Doctor Kilgore's paper was much appreciated by his audience, as shown by the lengthy discussion which followed.

Dr. Clara H. Spalding of Richmond was unanimously voted a member of the society.

This meeting was the first held in Martinez this year and drew a large attendance from the surrounding communities.

The Woman's Auxiliary held a business and social meeting at the First Congregational Church, Martinez, on the same evening and were hostesses to the members at a well-appointed supper.

Those present at the society meeting were: Doctors J. L. Beard, E. Merrithew, G. W. Sweetzer, and I. O. Church, all of Martinez; H. D. Neufeld, Bay Point; M. C. McLafferty, Brentwood; H. C. Gifford, Danville; C. R. Leech, Walnut Creek; S. V. Weil, Selby; J. M. McCullough and W. G. Rowell, Crockett; Rosa Powell, M. Deininger-Keser, J. W. Bumgarner, F. W. Overdahl and L. H. Fraser, all of Richmond; Eugene S. Kilgore of San Francisco; O. D. Hamlin and C. L. Abbott, Oakland.

L. H. FRASER, *Secretary*.

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#### FRESNO COUNTY

The regular meeting of the Fresno County Medical Society was held after dinner at the University Sequoia Club, April 1.

Miss Foster, representative of the Red Cross Visiting Nurses' Association, spoke of a plan whereby nurses will visit patients where the services of a full-time nurse are not required. The fee for this service will be \$1 per hour.

Dr. D. I. Aller, chairman of the Welfare Committee, submitted his report. It was moved, seconded, and carried that this report endorsing the rules and regulations of the Red Cross Visiting Nurses' Association be adopted.

It was moved, seconded, and carried that the president appoint a committee of three to report on the County Hospital situation in Fresno County. That they have the power of employing expert help in obtaining all needed data. The president appointed the following committee: Doctors D. H. Trowbridge (chairman), T. N. Sample, and C. O. Mitchell.

Dr. F. D. DeLappe of Modesto, councilor for this district, gave an outline of the work being done by the council of the state society. They recommend: (1) That a Woman's Auxiliary be organized in every county society. (2) That members of the society appoint a committee to solicit members for optional medical defense.

Dr. E. B. Towne of Stanford University gave a very interesting talk illustrated by many lantern slides. The subject was "The Diagnosis and Localization of Tumor of the Brain."

J. M. FRAWLEY, *Secretary*.

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#### LOS ANGELES COUNTY

Industrial Accident Section.—One hundred and sixty doctors, representative of all parts of southern California, attended the regular March meeting of the Industrial Accident Section of the Los Angeles County Medical Association as guests of the Golden State Hospital, Los Angeles, through the courtesy of Dr. J. Rollin French. Inspection of modern hospi-

\* For a complete list of general officers, of standing committees, of section officers, and of executive officers of the component county societies, see index reference on the front cover, under Miscellany.

talization of traumatic injury cases and demonstration of hospital fracture apparatus began at 5:30 p. m., following which an excellent buffet supper was served for all those attending. At 7 p. m. the regular meeting was called to order, with Dr. John W. Crossan presiding, and the following scientific papers were presented: "Fracture Dislocation of the Fourth Lumbar Vertebra with Paralysis, and the Presentation of the Case with Recovery," S. Herzikoff; "Bursitis of the Shoulder Joint as Related to Industrial Injuries," I. D. Tiedemann. Doctors John C. Wilson, John Dunlop, H. W. Chappel, William B. Bowman, I. Leon Myers, and others carried on the enthusiastic discussion which followed. A unique feature of the Industrial Accident Section is that all scientific papers presented at its meetings are subsequently supplied to members in printed abstract form. All doctors eligible to membership in the American Medical Association are eligible to apply for membership in this section.

FLOYD THURBER,

*Secretary, Industrial Accident Section.*

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#### MARIN COUNTY

The Marin County Medical Society held its monthly meeting on the evening of March 27 at the Cottage Hospital in San Rafael. There were nine members present.

The minutes of the previous meeting, February 5, were read and approved. A communication from the State Association regarding the present status of the Porter Bill, No. H. R. 9054 and also No. H. R. 10561, were read and placed on file. In keeping with the request of the State Association, it was decided that no action be taken regarding the above measure until further word from the State Association be received.

Following the business meeting, Dr. Alfred C. Reed of San Francisco gave an interesting talk on "Oriental and Tropical Diseases." His lecture was illustrated by a number of lantern slides.

L. L. ROBINSON, *Secretary.*

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#### MONTEREY COUNTY

The regular monthly meeting of the Monterey County Medical Society was held at the Hotel Jeffery in Salinas March 7. Seventeen members were present.

Following dinner there was a short business meeting at which time Dr. F. E. Wiebe of Soledad was elected to membership in the society.

The meeting was then turned over to Dr. Edmund Butler of San Francisco, who gave an interesting talk on "Spinal Anesthesia and Its Practicability in Abdominal Surgery" which was greatly enjoyed by the members present.

On April 4 the regular monthly meeting was held at the Hotel San Carlos in Monterey.

The wives of members were invited to be present to consider the organization of a Woman's Auxiliary. Following dinner the ladies held a meeting at which time Mrs. C. H. Lowell of Carmel was elected president and Mrs. A. A. Arehart of Pacific Grove was elected secretary of the new organization.

Dr. P. T. Phillips and Dr. A. L. Phillips of Santa Cruz were present as guests and both gave brief but interesting talks which were enjoyed by those present.

J. A. MERRILL, *Secretary.*

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#### NAPA COUNTY

The regular monthly meeting of the Napa County Medical Society was held Wednesday, April 2, at 7 p. m. at the Ramona Gardens, Napa. Members and their wives enjoyed a well-appointed banquet which was followed by a musical program by artists especially selected for this occasion. The first meeting of the ladies interested in the formation of a Woman's Auxiliary was held also. Mrs. Jean F. Rogers, state president of the auxiliary, addressed the ladies on the purpose of such an organization.

The medical society members met in regular session and were addressed by Mr. Celestine Sullivan, who

clearly and concisely portrayed the present trend of medical practice as compared to other businesses. Mr. Heartly Peart, legal counsel for the California State Medical Association, spoke most entertainingly and instructively concerning the legal aspect as regards the practice of medicine.

This first joint meeting was an enthusiastic gathering, and others to come are anticipated.

It was moved and carried that the society should bear the expense of entertaining the ladies.

Those present were:

Members—W. L. Blodgett, M. M. Booth, C. H. Bulson, H. R. Coleman, G. I. Dawson, C. A. Johnson, Edward Love, D. H. Murray, A. K. McGrath, C. E. Nelson, Robert Northrop, J. B. Rogers, J. Robertson, C. E. Sisson, and L. Welti.

Mesdames C. H. Bulson, W. L. Blodgett, H. R. Coleman, G. I. Dawson, C. A. Johnson, M. L. Lewis, A. K. McGrath, Edward Love, D. H. Murray, C. E. Nelson, Robert Northrop, S. Z. Peoples, H. Peart, J. B. Rogers, H. R. Rogers, C. E. Sisson, C. Sullivan, and L. Welti.

Visitors—M. L. Lewis, S. Z. Peoples, H. R. Rogers of Petaluma and F. R. Moore, H. A. Keener, L. J. Roberts, W. M. Kerr of Mare Island.

C. A. JOHNSON, *Secretary.*

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#### ORANGE COUNTY

The regular monthly meeting of the Orange County Medical Association was held in the staff room of the County Hospital Tuesday, April 1. The minutes of the last meeting were read and approved. The second reading on Dr. H. F. Gramlich's application for membership was heard and, by vote, he was unanimously admitted into the society.

An interesting talk on "Collections" was given by Mr. Lynn Chuninc, who proposed to the society that the members form their own collection agency by incorporating and working on a nonprofit basis. The president appointed a committee to investigate the proposition. This committee is composed of: G. M. Tralle, R. A. Cushman, and H. G. Huffman.

Biographical sketches of two of our deceased members, Daniel Franklin Royer and Walter Watkins Davis, were read by the secretary. It was moved and seconded that a copy be sent to Mrs. Davis. This was unanimously carried.

Due to the fact that many of our members have office hours in the evening from 7 to 8 o'clock, it was suggested that the time of meetings be changed to 8:15 o'clock. By vote this change was adopted. The president stressed the point that he was to call all meetings promptly at this specified time.

Case reports were given by Harold Gobar, "Imperforate Anus"; E. D. Kilbourne, "Liver Abscess"; and R. S. Wade, "Prostatic Hypertrophy." These cases were fully discussed. Doctor Brunemeier described a similar case of imperforate anus that he treated in China.

The speaker of the evening was Dr. D. A. Harwood of Santa Ana. His subject was "Uterine Fibromyomata—Their Diagnosis and Various Methods of Treatment." A very complete discussion of the subject was given by the speaker, who outlined the advantages of radium in some cases over x-ray or surgery. He also stressed the probable etiology in a number of these cases as being due to a local hyperemia.

There being no more business the meeting adjourned.

On April 4 and 5 the Orange County Medical Association and the Orange County Woman's Auxiliary acted as hosts to the Southern California Medical Association during its meeting in Santa Ana. An elaborate program and entertainment for both members and their wives, in addition to the scientific part of the session, served to make this meeting a very decided success. A detailed report of this session will be given by the secretary of the Southern California Medical Association.

HARRY G. HUFFMAN, *Secretary.*



## SAN DIEGO COUNTY

Dr. H. E. Robertson of the Mayo Clinic talked before the Mercy Hospital staff March 18 on the subject, "Postmortem Examinations and Means for Expansion of Their Usefulness." Doctor Robertson stressed the importance of postmortem examinations and gave his hearers some good, practical advice. In his remarks he made a plea for more dignity in conducting the autopsy, a better understanding between physician and undertaker, and the need of informing relatives as to the findings of the examination. The most important point brought out by Doctor Robertson was the need for wider dissemination of the information of postmortem findings among the members of the profession, either at staff meetings or by making the reports in the form of a letter.

The regular monthly meeting of the staff of the Scripps Memorial Hospital was held March 17, at 8 p. m. Dr. Hall G. Holder gave a very interesting paper on "The Modern Treatment of Malignant Diseases." Several members of the staff closed the meeting with a very lively discussion.

A number of the members of the county society motored to Santa Ana to attend the sessions of the Southern California Medical Association meeting. Dr. May T. Riach gave an interesting paper on "A Plea for a Closer Cooperation Between the Ophthalmologist and the Internist." Dr. Hall G. Holder and Dr. M. W. McDougall gave a paper entitled "Circulatory Diseases of the Extremities, with Special Reference to Test of Capillary Circulation."

On Tuesday evening, April 8, the regular monthly meeting and dinner of the San Diego County Medical Society was held in the Don Room of the Hotel El Cortez. Dr. Samuel Ingham, neurologist of Los Angeles, was the speaker of the evening, and gave a very interesting talk on "How to Make a Neurological Examination and How to Interpret Your Findings."

ROBERT POLLOCK.

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## SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday evening at eight o'clock, April 3, in the Medico-Dental Club rooms, 242 North Sutter Street, Stockton.

The meeting was called to order by Dr. Harry E. Kaplan, president. The minutes of the previous stated meeting and of a special meeting of the board of directors held March 31 were read and approved.

Dr. J. J. Sippy reported that the medical society had sponsored a loge of forty-five tickets for the Amateur Boxing Match being given by the Amblers' Club for the benefit of crippled children. Of these, thirty-six tickets were already sold. Eighty-five per cent of all funds received are to be devoted to the charitable purposes.

Dr. Dewey R. Powell reported for the committee coöperating with the Committee on the Cost of Medical Care. They met with Doctor Sinai to go over the details of the work, approving and modifying the plans for local conditions.

Dr. R. V. Looser moved that "the time of at least fifteen minutes be set aside at each stated meeting for discussion of problems for the good of the county society and its members." Seconded.

Dr. Dewey R. Powell moved to amend the motion, inserting the words, "sufficient time be allotted," instead of "fifteen minutes." Seconded.

Both the amendment and the original motion were carried.

Dr. Fred R. De Lappe of Modesto, the district councilor, was present and spoke to the society on several matters. He called attention to the benefits to be derived from an active Woman's Auxiliary; he urged the importance of the Optional Medical Defense; the solicitation of new members; more attention to the careful writing of narcotic prescriptions; and attendance at the state convention this year.

Dr. Dewey R. Powell moved that, as a compliment to our member, Dr. George Sanderson, who is secretary of the Northern District Medical Society, our own society should entertain the visiting members at luncheon when they come here for the convention on Tuesday, April 8. Seconded and carried.

There being no further business, Doctor Kaplan introduced Dr. William W. Newman of San Francisco for an address on "The Sweaney Method of Examining Sputum for Acid-Fast Bacilli Often Found in Patients with no Physical and no X-ray Evidence of Tuberculosis." He said that prior to using the concentration method it was seldom that acid-fast organisms were found in the sputum. During the past ten months eighty-six specimens had been examined by the Sweaney method with 20 per cent showing positive, whereas only two cases were positive by the direct method. The unique point in this method is that after the sputum has been collected in a clean, rubber-stoppered bottle, it is first incubated for twenty-four hours. It is then digested with sodium hydroxid, centrifuged, the supernatant fluid decanted and specimens from the upper layer of sediment stained and examined in the usual manner by the Ziehl-Neelson technique. He named as possible sources of error the following: (1) Scratches on slides. (2) Saprophytic bacteria from ordinary cork. (3) Presence of other acid-fast bacteria such as Smegma and Timothy. (4) Tuberculous bacilli as saprophytes. He went into detail to show that precautions had been taken to avoid such errors.

All of the doctor's patients had originally presented themselves for heart examination because of pain in the chest, usually about the heart. He presented an analysis of the seventeen positive cases. Six of these had no cardiovascular pathology. Of these, five complained of pain in the chest and the other was short of breath. Four of them showed no pathology in the chest by x-ray or physical examination, but two had positive pathology on x-ray. Four of the six he believes were tuberculous because of history, underweight, or afternoon temperatures. Of the other nineteen, eleven had definite cardiovascular pathology, but three also had positive tuberculous symptoms for conditions. With the remaining eight, as their cardiovascular symptoms disappeared, the acid-fast bacilli also disappeared from the sputum. In conclusion, the doctor said: "We have seventeen patients having acid-fast bacilli in their sputum. Of these only four have confirmatory evidence of tuberculosis in their x-ray and only nine can on any account be suspected of tuberculosis. What is the significance of the remaining eight?"

The discussion was led by Dr. N. E. Williamson, who said that there had been many concentration methods used. A Doctor Bean used one for tubercle bacilli in the blood and was amazed at the large number he found until it was discovered that the distilled water used for dilution was contaminated. He mentioned the large number of acid-fast bacilli which are found in nature. He feels conservative about results and pays more attention to cultures.

Dr. J. W. Barnes next presented a paper on "Complications of Some of the Acute Infections." He called attention particularly to the grave danger to the heart of a child in such conditions as acute rheumatism, chorea, acute tonsillitis, quinsy, and even attacks of growing pains. He mentioned that too often no attention is paid to the heart in the examination, although it is the one organ most often affected. In the matter of treatment he said that rest is the one great factor over a long period—at least six months and better upward of a year.

Following this paper, Doctor Newman presented moving pictures showing the heart action under normal conditions and following stimulation of nerves. He demonstrated that the heart ventricles are filled, not by auricular contraction, but by venous pressure. Also, he pointed out in the pictures that auricular



fibrillation tends to recover, whereas ventricular fibrillation ends in death.

The president appointed Doctors Gallegos, Dozier, Foard, and Van Meter to arrange for a smoker for the society.

The meeting was well attended, there being Drs. Newman, De Lappe, Sutton, Barton Powell Jr., and Mr. Curtis as visitors; also two nurses from the Health Center. The members present were: Drs. E. A. Arthur, Barnes, Blackmun, Blinn, Broaddus, Conzelmann, Dozier, Foard, Gallegos, Goodman, Haight, Hanson, Kaplan, Krout, Looser, McCoskey, B. J. Powell, D. R. Powell, Priestley, Rohrbacher, Sanderson, Sheldon, Sippy, Smyth, Thompson, and Williamson.

There being no further business the meeting adjourned for refreshments.

C. A. BROADDUS, *Secretary*.

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#### SAN LUIS OBISPO COUNTY

The regular monthly meeting of the San Luis Obispo County Medical Society was held Saturday night, March 22, at the Atascadero Inn. Eleven members were present.

The minutes of the two previous meetings were read and approved.

Dr. Gifford L. Sobey of Paso Robles was elected delegate and Dr. H. S. Walters of San Luis Obispo was elected alternate for the next meeting of the state medical society.

A discussion was held upon the federal Porter narcotic bills now before Congress, and it was decided to forward a resolution to the members of Congress informing them that the County Medical Association, while in favor of the regulation of narcotics, was opposed to the Porter bill.

After discussion it was decided that the secretary forward to the State Medical Association a brief summary of each monthly meeting for inclusion in the state medical journal. A general discussion was held relative to revision of the county fee schedule, and to formulation of some plan whereby collections could be made more promptly.

The meeting adjourned at 10:50 o'clock.

Those present were Doctors Gallup, McGarvey, Sobey, Butler, Larsen, Bartle, Mills, Law, Walters, Mugler, and Gillihan.

ALLEN F. GILLIHAN, *Secretary*.

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#### SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on Monday, April 14, at 8 p. m. in the new Bissell Auditorium of the Cottage Hospital.

The meeting was called to order by President Freidell, and the minutes of the last meeting were read and approved.

Doctor Freidell then introduced Dr. Elmer Bissell, who stated that he and Mrs. Bissell fully appreciated the fact that the best must be given to the patient, but at the same time they felt that the doctors themselves should not be slighted, and to this end it was their great pleasure to endow this Bissell Auditorium for the use of the medical profession, together with a lounging room and library, with a librarian in charge. Doctor Bissell also expressed the keen pleasure of Mrs. Bissell in selecting the draperies and furniture for the rooms, and hoped that the joy of the medical profession in the gift would be commensurate to that of the donors.

It was then moved by Doctor Bakewell, and seconded by Doctor Brush, that a rising vote of thanks be given to Dr. and Mrs. Bissell for their wonderful contribution to the Cottage Hospital for the benefit of the medical profession.

The scientific program was opened by Doctor Profant, who gave a paper, illustrated with lantern slides,

on "Gradenigo's Syndrome, with a Consideration of Petrositis." This paper was discussed by Doctors Geyman, Hunt, and Thorner.

Doctor Wills then followed with a presentation on "Conservatism in Prostatic Enlargement." This was discussed by Doctor Pierce.

Both papers were enthusiastically received and enjoyed by all.

The president then introduced Mr. McMann, who spoke briefly on the coming convention in Santa Barbara of the California Social Service Conference. Favorable comments were made by Doctors Lamb and Markthaler, and it was moved, seconded, and carried that the Santa Barbara County Medical Society pay \$10 for a yearly membership in this conference.

There being no further business the meeting adjourned.

W. H. EATON, *Secretary*.

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#### VENTURA COUNTY

The April meeting of the Ventura County Medical Society was held Tuesday evening, April 8 at the clinic of the Ventura County Hospital. Dr. D. G. Clark opened the meeting. Members present were: D. G. Clark, Smolt, W. S. Clark, Hill, Homer, Patton, Achenbach, Tillim, Welsh, Armitstead, Shore, Schultz, Jones, Felberbaum, and Bardill. Guests were: Dr. H. J. Ullmann and Dr. and Mrs. Richard Evans of Santa Barbara, and Drs. Mosher and Rhymes of Ventura.

The meeting adjourned to the County Hospital, where Dr. R. W. Homer demonstrated several cases of malignant disease. Upon return to the clinic building, Doctor Evans read a paper on the "Histopathology of Diseases of the Breast." This paper was accompanied by a series of very fine microscopic sections, shown by means of a projecting microscope.

Doctor Ullmann then presented, by means of a motion picture projector, a marvelous film showing the growth and reproduction of living cells in normal and malignant tissues and the effects of radium thereon.

A short business meeting followed. The secretary was instructed to refer Doctor Cornman's request for nonresident membership to the state secretary.

CHARLES A. SMOLT, *Secretary*.

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#### CHANGES IN MEMBERSHIP

##### New Members

*Alameda County*—Frank S. Bissell, Edwin Daniel Greer, Oliver Brinton Jensen, Theodore E. Schwarz, and Anah Cecelia Wineberg.

*Butte County*—Frank Moore Whiting.

*Contra Costa County*—Ira Otis Church and Clara H. Spalding.

*Fresno County*—A. A. Arehart.

*Imperial County*—T. E. Bartholomew and Oran L. Webster.

*Kern County*—Harrison M. Hawkins.

*Los Angeles County*—David George Azadian, Charles Hall Cowgill, William Edward Hunter, Hugh Toland Jones, Theodore Spalding Kimball, Angus Cameron McDonald, Susanne Ring Parsons, Marvin K. Paup, Rankin Reiff, Monte Salvin, James Robert Sanford, and Fred Cecil Watson.

*Merced County*—Amzi Martin Gregory.

*Orange County*—Henry Frank Gramlich, Henry MacVicker Smith, and Robert Simpson Wade.

*Sacramento County*—Ernest Sevier.

*San Benito County*—Rosewell Hull and Fred Fellows Sprague.

*San Bernardino County*—Samuel Andrew Crooks, Franklin Hunter Garrett, and Charles William Moots.

*San Diego County*—John Carl Schleppe, Rudolph Herbert Sundberg, Oril Stone Harbaugh, and Malcolm Y. Marshall.



**San Francisco County**—Jessie Marguerite Bierman, Charlotte A. Boehm, Donald Alfonso Carson, Chester L. Cooley, William Amos Key, and Helen Hopkins Detrick.

**San Luis Obispo County**—Harry Seth Walters.

**San Mateo County**—Augustus A. Gerlach, R. J. Gerlough, Ralph E. Scovel, and Ralph D. Howe.

**Santa Clara County**—Lucas W. Empey.

**Santa Cruz County**—Frederick P. Shenk.

**Siskiyou County**—Daniel F. McCann and Albert H. Newton.

**Solano County**—Warren Corneil Jenney.

**Sonoma County**—Byron Lee Baldwin, H. Julian Wright, M. H. Hamelink, and Hiram A. Haskell.

**Tulare County**—Elmer C. Bond, Reuben C. Hill, H. A. Todd, and Karl F. Weiss.

**Ventura County**—Fred A. Shore and Charles Raymond Illick.

#### Transferred Members

Edwin D. Kilbourne, from Los Angeles to Orange County.

Arthur E. Dart, from San Francisco to Alameda County.

Delta Ross Olsen, from San Francisco to Alameda County.

John L. Fanning, from Placer to Sacramento County.

Owen W. E. Nowlin, from Los Angeles to Illinois Medical Association.

William M. Maloney, from Los Angeles to Arizona Medical Association.

Blake C. Wilbur, from San Francisco to Santa Clara County.

Willis E. King, from San Francisco to Sacramento County.

Frederick P. Shafer, from San Francisco to Los Angeles County.

Ira B. Bartle, from Imperial to San Luis Obispo County.

Jens W. Larsen, from Yolo-Colusa to San Luis Obispo County.

Edith Harrison, from Santa Cruz to Humboldt County.

Iner Sheld Ritchie, from Imperial to San Bernardino County.

Walter B. Felger, from Yolo-Colusa to Sacramento County.

#### Resignations

**San Francisco County**—Ethan H. Smith, Hajo P. Plagge, and Edward P. Driscoll.

**San Diego County**—Frank A. Lee.

**Santa Cruz County**—Thomas F. Conroy.

#### Deaths

**Edie, Guy Lewis.** Died at San Francisco, April 8, 1930, age 72 years. Graduate of the University of Virginia Department of Medicine, 1879. Licensed in California, 1901. Doctor Edie was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Franklin, James William.** Died January 4, 1930, age 50 years. Graduate of the University of Texas School of Medicine, Galveston, 1909. Licensed in California, 1914. Doctor Franklin was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

**Gatchell, Ella Frances.** Died at Chico, April 9, 1930, age 77 years. Graduate of the College of Physicians and Surgeons, Boston, 1889. Licensed in California, 1895. Doctor Gatchell was a member of the Butte County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Guy, Walter Parry.** Died at Los Angeles, April 3, 1930, age 47 years. Graduate of Rush Medical College, Chicago, 1909. Licensed in California, 1920. Doctor Guy was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

**Harbinson, James Edward.** Died at Woodland, March 9, 1930, age 36 years. Graduate of University of California Medical School, Berkeley, 1922. Licensed in California, 1922. Doctor Harbinson was a member of the Yolo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Henrikson, Gustav.** Died at Sacramento, February 18, 1930, age 72 years. Graduate of California Eclectic Medical College, Los Angeles, 1894. Licensed in California, 1894. Doctor Henrikson was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and a Fellow of the American Medical Association.

**McDowell, Anderson Eddie.** Died at Los Angeles, March 20, 1930, age 49 years. Graduate of Northwestern University Medical School, Chicago, 1909. Licensed in California, 1909. Doctor McDowell was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

**Muchnic, Adolph Maurice.** Died at Los Angeles, March 29, 1930, age 54 years. Graduate of University of Illinois College of Medicine, Chicago, 1911. Licensed in California, 1911. Doctor Muchnic was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

**Read, William Parsons.** Died at San Francisco, April 12, 1930, age 56 years. Graduate of Jefferson Medical College of Philadelphia, 1896. Licensed in California, 1898. Doctor Read was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

\* \* \*

Erratum.—The notice of death of Dr. Joseph Salem Rubin, page 293 of the April journal, copied from the February 22, 1930 *Journal of the American Medical Association*, page 577, we are glad to state, was an error. Doctor Rubin, in a personal letter, informs us he is still engaged in the practice of medicine at Los Angeles.

#### THE WOMAN'S AUXILIARY OF THE CALIFORNIA MEDICAL ASSOCIATION\*

For the convenience of officers of the county auxiliaries, the names and addresses of the national officers and of standing committees of the Woman's Auxiliary of the American Medical Association are here printed. It is possible that county auxiliaries may wish to organize their own standing committees after a somewhat similar plan:

##### Officers

President, Mrs. George H. Hoxie, 3719 Pennsylvania Avenue, Kansas City, Missouri.

President-elect, Mrs. J. Newton Hunsberger, 514 West Main Street, Norristown, Pennsylvania.

Corresponding secretary, Mrs. G. B. Arnold, 906 East Armour Boulevard, Kansas City, Missouri.

Recording secretary, Mrs. Arthur T. McCormick, Brown Hotel, Louisville, Kentucky.

Treasurer, Mrs. Fred L. Adair, 2500 Blaisdell Avenue, Minneapolis, Minnesota.

Historian, Mrs. S. C. Red, 817 Caroline Street, Houston, Texas.

\* As county auxiliaries to the Woman's Auxiliary of the California Medical Association are formed, the names of officers should be forwarded to the state secretary-treasurer, Mrs. R. A. Cushman, 632 North Broadway, Santa Ana, and to the California Medical Association office, Room 2004, 450 Sutter Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed for publication in this column.

*Chairman of Standing Committees*

Program—Mrs. E. V. DePew, 1115 East Agarita Avenue, San Antonio, Texas.

Press and Publicity—Mrs. Allan H. Bunce, 368 Ponce de Leon Avenue, N. E., Atlanta, Georgia.

Public Relations—Mrs. M. P. Overholser, State Hospital No. 2, St. Joseph, Missouri.

Finance—Mrs. James Blake, Hopkins, Minnesota.

Revisions—Mrs. J. N. Hunsberger, 514 West Main Street, Norristown, Pennsylvania.

Printing—Mrs. C. B. Forcey, 105 Beaver Street, Sewickley, Pennsylvania.

Social—Mrs. Southgate Leigh, 526 Shirley Avenue, Norfolk, Virginia.

**CONTRA COSTA COUNTY**

The Woman's Auxiliary of the Contra Costa County Medical Society held its monthly meeting April 8 at the Congregational Church in Martinez. Mrs. J. M. McCullough, president, presided. The minutes of the previous meeting were read and approved. An article on "Reasons for a Woman's Auxiliary" by the Iowa State Medical Society was read.

A committee composed of Mrs. I. O. Church (chairman), Mrs. H. L. Neufeld, and Mrs. F. W. Overdahl was appointed to visit Sunshine Camp, the county preventorium. All members were urged to visit Sunshine Camp to acquaint themselves with the work being done for the undernourished and pre-tuberculous children of this county.

A Silver Tea is planned for May 20 at the home of Mrs. J. L. Beard of Martinez. Mrs. J. W. Bumgarner is in charge of the program.

After the business meeting, those present enjoyed vocal selections by Mrs. I. O. Church, with Mrs. J. W. Bumgarner as accompanist. Three very pleasing readings were then given by Mrs. F. W. Overdahl. Later the doctors joined the ladies, and refreshments were served by the auxiliary.

Members present were: Mesdames I. O. Church, J. L. Beard, H. D. Neufeld, C. R. Leech, L. H. Fraser, J. W. Bumgarner, F. W. Overdahl, J. M. McCullough, and S. N. Weil.

HELEN WEIL, *Secretary*.

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**LOS ANGELES COUNTY**

The regular meeting of the Woman's Auxiliary was held Thursday, April 17, at 2:30 p. m. in the Assembly Hall, Friday Morning Club building, Los Angeles, with Mrs. James F. Percy, president, presiding. Mrs. George C. Hunter, acting secretary.

Dr. George H. Kress, editor of CALIFORNIA AND WESTERN MEDICINE, was the distinguished speaker of the afternoon.

A musical program was given by Mrs. William A. Clark, violinist, with Mrs. E. D. Kremers, accompanist, from Pasadena. The tea hour was in charge of Long Beach members, Mrs. B. von Wedelstaedt, chairman.

The following committees in charge:

Reception—Mesdames William H. Duffield, Los Angeles; LeRoy B. Sherry, Pasadena; H. R. Boyer, Glendale; Fred B. Clarke, Long Beach; Elliot P. Smart, San Fernando.

Hostess—Mrs. Robert V. Day; assistant, Mrs. John V. Barrow.

Credentials—Mrs. Elliot Alden.

Ushers—Mrs. Verne R. Mason.

Press and Publicity—Mrs. Edward Huntington Williams.

Ways and Means—Mrs. Philip Schuyler Doane.

Membership—Mesdames Edgerton O. Crispin, Los Angeles; Harry F. Markolf, Pasadena; H. V. Brown, Glendale; William B. Wright, Jr., Long Beach; John L. McDaniel, San Fernando.

Bulletins—Mrs. George G. Hunter.

President's Aide—Mrs. W. H. Futch.

Program—Mesdames E. M. Lazard and H. G. Marxmiller.

Courtesy—Mrs. Wilbur Parker; assistant, Mrs. W. H. Mayne.

Club Survey—Mrs. Norman Williams.

Sick—Mrs. Arnold Burkelman.

In May the Los Angeles County Medical Association is planning to give an aviation ball and frolic in honor of the Woman's Auxiliary.

CORA YOUNG WILLIAMS,  
*Publicity Chairman*.

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**MONTEREY COUNTY**

A Woman's Auxiliary of the Monterey County Medical Association was formed on April 4.

Six charter members elected the following officers: Mrs. C. H. Lowell, president; Mrs. R. M. Fortier, first vice-president; Mrs. R. J. Cluen, second vice-president; Mrs. Arthur A. Archart, secretary-treasurer.

The next meeting of the auxiliary will be held Thursday afternoon, April 10, at the Del Monte Hotel, when plans for the convention of the State Medical Association will be considered.

MRS. ARTHUR A. AREHART,  
*Secretary*.

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**ORANGE COUNTY**

The regular meeting of the Woman's Auxiliary of the Orange County Medical Association was called to order by the president, Mrs. F. E. Coulter, at the home of Mrs. R. A. Cushman on March 4.

The minutes of the previous meeting were read and accepted with corrections.

A Committee on Publicity was appointed as follows: Mrs. R. A. Cushman, chairman; Mrs. W. P. Baker.

The Committee on Entertainment for the wives of delegates to the Southern California Medical Association was announced by Mrs. Coulter as follows: Mrs. Harry Huffman, general chairman; Mesdames Robertson Ycagle, Clark, D. R. Ball, H. A. Johnston, Newkirk, Baker, and Cushman.

A report of the tentative plans was made by the chairman, Mrs. Huffman.

The treasurer's report was read and accepted.

An amusing excerpt from Alma Whitacker's "Sugar and Spice" about the meeting of the Los Angeles auxiliary was read by Mrs. Coulter.

An excellent and interesting talk on the work of the Orange County Health Department was given by Dr. K. H. Sutherland, head of the department.

It was moved and seconded that a courtesy committee be appointed to attend to sending flowers to sick members of the auxiliary. Motion carried.

It was moved and seconded that a committee for hostess problems be appointed. Motion carried.

The meeting was then adjourned.

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The regular meeting of the Woman's Auxiliary of the Orange County Medical Association was called to order by the president, Mrs. F. E. Coulter, at the home of Mrs. Frank Paterson, 2315 Heliotrope Drive, Santa Ana, on April 1. Thirty-five members were present.

The minutes of the previous meeting were read and accepted. A letter from the Ebell Society, in answer to our letter of February 23, was read. A note of thanks from Mrs. Chapline was also read.

The president then appointed the following committees:

Committee on Entertainment (Hostess Problems)—Mrs. Frank Paterson (chairman), Mrs. Emmett Raitt, and Mrs. H. M. Robertson.



Committee on Flowers (Courtesy Committee)—Mrs. R. P. Yeagle (chairman), Mrs. J. I. Clark, and Mrs. H. D. Newkirk.

Mrs. Paterson reported for the Entertainment Committee that the May meeting would be held at the home of Mrs. D. A. Harwood, 2467 Riverside Drive, Santa Ana. Mrs. W. F. Kisting will be cohostess.

Mrs. Yeagle reported for the Flower Committee that calls had been made on Mrs. Chapline and Mrs. Johnston and flowers taken to each.

A motion was made by Mrs. Kisting and seconded that a silver offering be taken at each meeting to cover the expenses of the Flower Committee. Motion carried.

Business of the meeting was then set aside for our speaker, Doctor Ruble, who gave a most comprehensive talk on immunity and the benefits of examinations of the school children. The decrease of the virulence of diphtheria, especially, and other contagious diseases in general, due to inoculations of children, was shown.

On resumption of the business of the day, Mrs. Huffman reported on the plans for the entertainment of the wives of the visiting delegates to the Southern California Medical Association.

It was decided that the dues of the auxiliary should run from January to January of each year.

Mrs. Cushman, secretary-treasurer of the State Auxiliary, speaking of the coming meeting at Del Monte, urged all wives to accompany their husbands if possible.

Mrs. Baker moved that the hour of the meetings be 2:30 o'clock hereafter. Motion was seconded and carried.

It was moved by Mrs. Paterson that all members of the auxiliary are expected to come to the meetings and only those not able to come are to send regrets to the hostess. Motion was seconded and carried.

The meeting was then adjourned.

EDNA M. BALL, *Secretary*.

## NEVADA STATE MEDICAL ASSOCIATION

W. A. SHAW.....President  
R. P. ROANTREE, Elko.....President-Elect  
H. W. SAWYER, Fallon.....First Vice-President  
E. E. HAMER, Carson City.....Second Vice-President  
HORACE J. BROWN.....Secretary-Treasurer  
R. P. ROANTREE, D. A. TURNER,  
S. K. MORRISON.....Trustees

### COMPONENT COUNTY SOCIETIES

#### WASHOE COUNTY

The regular meeting of the Washoe County Medical Society was held at the Reno City Hall on March 8, Dr. E. E. Hamer of Carson presiding.

The Library Committee appointed at the last meeting of the society reported cooperation with the trustees of the Washoe County Library and stated that there would be placed on file for interested readers the current medical literature of the day.

Since the last meeting of the society, every Nevadan was pained to learn of the untimely death of a former president of this society who served as chief public health officer of Nevada for four years. The death of Dr. Henry Albert at Des Moines, at which city he had his headquarters since leaving Reno four years ago, was received with sincerest regret by the medical profession of Nevada, to whom he had endeared himself by his splendid scientific labor. The committee appointed by the president to draft resolutions relative to his work and death responded in a suitable manner.

Doctor Perry of Reno read a well-illustrated paper on "Colles' Fracture." The doctor dwelt upon the anatomical points involved, the pathology and treatment. With reference to the use of patent splints for such cases, Doctor Perry said that, in his opinion, better results were obtained by making a splint to fit

the individual than by the use of ready-made ones. Complete relaxation under ether, sufficient traction, supporting splints with x-rays to observe results, corrections of malpositions and early movements of the fingers with massage, would in the majority of cases restore normal contour and function.

Dr. Richard Schofield, industrial surgeon at Hobart Mills, followed with a paper on "Fracture of the Elbow," citing fifteen cases. The essential points stressed in Doctor Schofield's paper were more time and patience in getting broken parts into coaptation with liberal aid of x-ray pictures taken during the operation to assure that the parts were coapted. Next to avoid keeping fractured bones too long in one position without releasing the splints and, guided by the x-ray picture, making a readjustment where necessary.

In both papers stress was laid upon necessity of an aseptic field in all compound fractures. The writer of these excerpts would add the use, too, of tetanus antitoxin in every compound fracture and when in doubt as to results, the need for consultation. Consultation divides responsibility, and in bad cases avoids possible lawsuit. A poorly reduced fracture is always a living testimony against the operator and a damaging exhibit as long as the patient lives.

No further discussions. The society decided that it would cooperate with the Lassen County Medical Society to hold a joint meeting with them during the coming summer months.

There was a large attendance, two men coming from Susanville, about one hundred miles away, and several from points fifty and sixty miles. Let the eastern medicos, if they chance to read this, sit up and think what such distances mean.

Meeting adjourned.

THOMAS W. BATH, *Secretary*.

## UTAH STATE MEDICAL ASSOCIATION

H. P. KIRTLEY, Salt Lake City.....President  
WILLIAM L. RICH, Salt Lake City.....President-Elect  
M. M. CRITCHLOW, Salt Lake City.....Secretary  
J. U. GIESY, 701 Medical Arts Building,  
Salt Lake City.....Associate Editor for Utah

### COMPONENT COUNTY SOCIETIES

#### SALT LAKE COUNTY

The regular meeting of the Salt Lake County Medical Society was held at the Newhouse Hotel Monday, March 10.

The meeting was called to order at 8:15 p. m. by President M. M. Nielson. Thirty-six members and three visitors were present.

Joseph E. Peck presented a paper upon "Rural Obstetrics," which was discussed by J. Z. Brown, S. G. Kahn, E. M. Neher, and W. F. Beer.

L. E. Viko read a paper entitled "The Etiology of Heart Disease, with Especial Reference to Utah." This paper was discussed by Clarence Snow, W. R. Tyndale, J. Z. Brown, A. C. Callister, and G. H. Pace.

A. C. Callister, reporting for the Committee on Public Health and Legislation, explained the Porter Bill, now before the United States Senate, and suggested that the society go on record as being against this bill. This report was discussed by M. M. Nielson, Clarence Snow, and E. M. Neher. Clarence Snow moved that the society exert its efforts toward the prevention of the Porter Bill before the United States Senate, and that the secretary be instructed to write to Senators Smoot and King and Representative Colton to that effect; and, furthermore, that a copy of this action be sent to Secretary Olin West of the American Medical Association. Motion seconded and carried. J. Z. Brown suggested that a copy also be sent to the originator of this bill.

The application of Kenneth E. Noyes was read and turned over to the board of censors.

M. M. Nielson presented a plan for classification of all members of the Salt Lake County Medical Society in the telephone directory. He appointed a committee, consisting of R. T. Woolsey (chairman), Scott Jones, and A. J. Murphy, to investigate this plan.

Meeting adjourned at 9:45 p. m.

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The regular meeting of the Salt Lake County Medical Society was held at the L. D. S. Hospital on Monday, March 24.

The meeting was called to order at 8 p. m. by President M. M. Nielson. Fifty-nine members and nine visitors were present.

The minutes of meeting of March 10 were read and accepted without correction.

The following clinical program was presented by members of the hospital staff:

Coronary Thrombosis, Clarence Snow; Irritable Colon and Visceroptosis, W. R. Tyndale; Perforated Duodenal Ulcer, Ralph Cornwall; Subdiaphragmatic Abscess, L. A. Stevenson.

J. R. Wherrit, K. E. Noyes, and Maurice Gordon were elected members of the society.

R. T. Woolsey reported for the committee on telephone classification. This committee favored the purchase of the space on the inside page of the telephone directory for listing of members of the Salt Lake County Medical Society. This was discussed by M. M. Nielson and Claude Shields. Clarence Snow moved that the report of the committee be adopted and that a special assessment of \$3 per year be levied on each practicing physician of the society, and that this assessment be paid at the same time as the dues. Motion carried.

L. J. Paul moved that the assessment for the year 1930 should be paid by April 14. Seconded and carried.

Meeting adjourned at 10:05 p. m.

BARNET E. BONAR, *Secretary*.

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#### UTAH COUNTY

The regular bimonthly meeting of the Utah County Medical Society was held March 12.

President Harriss of the B. Y. U., who had just returned from Russia, gave an interesting talk on "The Economic Situation in Russia and Comments on Russian Sanitary Conditions."

Mrs. R. G. Clark and Mrs. J. L. Aird gave several musical numbers.

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The second meeting in March was on March 26. Doctor Hagan of Spanish Fork gave a brief account of his visit to New York in his postgraduate course. Dr. Fred R. Taylor gave a review of the American Medical Association meeting in Portland, Oregon, last summer.

A report was given by Dr. J. W. Aird on the findings of the committee to investigate the Porter Bill that is up before Congress relative to centralizing authority in narcotics. The committee reported as unfavorable to take any action in the matter. Following a brief discussion by Dr. F. W. Taylor, it was voted that the association do nothing further about the Porter Bill.

J. L. AIRD, *Secretary*.

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#### WEBER COUNTY

At the regular meeting of the Weber County Medical Society held in the Spanish Room of the Hotel Bigelow March 27, Dr. Paul Weeks gave an interesting paper on "Physio-electrotherapy," illustrated by two reels of moving pictures.

State President-elect William Rich, Secretary M. M. Critchlow, and Treasurer Edwin LaCompte from Salt Lake City were in attendance and spoke briefly relative to our state society meeting to be held in Salt Lake City next September.

CONRAD H. JENSON, *Secretary*.

#### UTAH NEWS

**Meeting of the American Association for the Study of Goiter.**—The annual meeting of the association will be held at Seattle, Washington, with headquarters at the Hotel Olympic, July 10 and 11, with an excursion to Mount Rainier for all attending members on the 12th. Our association this year is the guest of the King County Medical Society, Seattle Washington.

A very interesting scientific program is promised. The tentative one published assures a very good final program.

All members in good standing in their county or provincial societies are eligible, and invited to become attending members upon presentation of their credentials and payment of a small fee (\$5).

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The regular monthly meeting of the Holy Cross Hospital Clinical Society was held the night of March 17 at the hospital.

The following scientific program was presented: Malignancy of Uterus, Tubes, and Ovaries, Claude Shields; Study of Electrocardiographic Tracings, R. Tandowsky; Use of Sodium Amytal in Eclampsia, B. E. Bonar; Hour-Glass Stomach, F. B. Bailey.

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Meetings of the Academy of Medicine have continued during the past month. The following programs have been presented:

March 13—Vincent's Angina of Lung, Dr. Van Scoyoc; Metabolic Arthritis, Dr. Le Barge.

March 20—General Aspects in Otolaryngology, Dr. Gordon; Malignant Tumors of the Breast, Dr. George Middleton.

March 27—Demonstration of Successful Cure—Case of Aneurysm with Reconstruction of Femoral Artery, Dr. F. Hatch; Schneider's Index, Dr. Skofield.

April 3—Can Malignant Tumors be Graded Histologically? Dr. Flood; Pathology of Impacted Teeth, Dr. Smith.

#### Death Notice

**Young, Albert Carrington.** Died March 25, 1930, age 72 years. Graduate of Dartmouth Medical School, Hanover, 1895. Licensed in Utah, 1895. Doctor Carrington was a member of Salt Lake County Medical Society, the Utah State Medical Association, and a Fellow of the American Medical Association.

#### OBITUARY

**George F. Roberts**  
1886-1930

Dr. George F. Roberts, Salt Lake physician, died Sunday, March 30, at his home, 1403 East Ninth South Street, after an illness of ten days. He was forty-four years of age.

Born at Kaysville, he attended the public schools of Salt Lake and later was graduated from the University of Utah Medical School. He attended Rush Medical College in Chicago, where he was graduated in 1912.

After serving an internship at St. Mark's Hospital, Doctor Roberts began the practice of medicine in 1914. In 1916 he served as captain of the Medical Corps with the National Guard on the Mexican border. During the World War he was a major with the 159th Medical Corps in France.

For a number of years he was assistant county physician and was well known in Masonic circles.

In addition to his parents, he is survived by his widow, Mrs. Florence Shermer Roberts; one son, Edward Roberts; two daughters, Janet and Susan Jean.



## MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

### NEWS

**Graduate Summer Courses.**—The University of California Medical School will hold its sixth annual session of graduate summer courses from June 2 to June 21, 1930.

June 2 to 7—This week will be devoted to a review of the recent advances in the fundamental sciences, clinical medicine, clinical surgery, and dentistry.

June 9 to 21—During the second and third weeks, most of the clinical branches will be covered in the morning and afternoon courses, which will include the following subjects: general medicine, circulatory diseases, applied anatomy and physiology of the nervous system, pediatrics, infant feeding and hygiene of infancy, general surgery, fractures, otorhinolaryngology, urology, tumors, x-ray, surgical anatomy, pathology, and laboratory diagnosis.

In addition to the regular courses, during the second and third weeks, there will be daily noon lectures and clinico-pathological conferences. These will be open to the medical public.

Announcement of courses will be mailed on request.

Please address: The Dean's Office, University of California Medical School, Parnassus and Third avenues, San Francisco.

**Lane Medical Lectures.**—The twenty-third course of lectures will be delivered by Charles R. Stockard, M. D., Ph. D., and Sc. D., Professor of Anatomy, Cornell University Medical School, New York City, on the evenings of May 5, 6, 7, 8, and 9, 1930 at 8:15 o'clock in Lane Hall, Stanford University Medical School, Sacramento Street near Webster, San Francisco.

The medical profession, students of medicine, teachers, and research workers are cordially invited to attend.

The titles of the lectures to be given by Dr. Charles R. Stockard are as follows:

May 5—Medical and Biological Aspects of Constitution.

May 6—Germinal Constitution.

May 7—Developmental Constitution.

May 8—The Interplay of Inheritance and Environment in Constitution.

May 9—Postnatal Reactions and Periodic Changes in Constitution.

Doctor Stockard will also give a lecture at Stanford University on Wednesday, May 7, at 4:15 p. m., on "Structural Types in Animals and Men."

**Special Lecture Course at Stanford School of Medicine.**—The special two weeks' course will be given early in the summer of 1930, probably from June 16 to June 28. The exact date will be announced by circular. The course is intended to cover some of the advances in various fields of medicine, particularly the clinical, made during the last decade and, it is hoped, will meet the needs of the practitioner who, having but a short time at his disposal, wishes to obtain a cursory review of the outstanding features of recent medical progress.

Four sessions will be held daily: two in the morning and two in the afternoon, with suitable intervals and opportunities for free discussion of the subjects with the instructors.

For full details, address William Ophüls, dean, Clay and Webster streets, San Francisco.

**Pacific Physical Therapy Meeting.**—The annual meeting of the Pacific Physical Therapy Association will be held at the Alexandria Hotel, Los Angeles, June 13 and 14, under the presidency of Dr. William W. Worster of San Gabriel. The program is now being assembled and includes a number of essayists of national reputation.

This meeting will be preceded by the twelfth annual session of the Western School of Physical Therapy, June 9 to 12, conducted by the following staff: Dr. Burton B. Grover (president), Dr. A. D. Willmoth, Dr. J. E. G. Waddington, Dr. J. C. Elsom, and Dr. M. W. Kapp. A full and interesting week of physical therapy will thus be assured to those in attendance. The classes will be limited to regular physicians, medical students, and technicians properly sponsored.

The entire mezzanine floor of the Alexandria will be occupied by the exhibits, which will be even more complete and elaborate than last year.

For information and program, address Dr. Charles Wood Fassett, secretary, 506 Detwiler Building, Los Angeles.

**The Annual Meeting of the American Physiotherapy Association** will be held at Detroit June 23-26 inclusive. All meetings other than clinics will be held at headquarters, Fort Shelby Hotel.

An invitation is extended to members of the California Medical Association to attend this annual session of the American Physiotherapy Association.

**California Conference of Social Work.**—With the attention of the nation focused on law and law enforcement, the California Conference of Social Work has chosen "Social Progress and the Law" as the general theme for its twenty-second annual meeting to be held in Santa Barbara May 13-17, 1930. Justin Miller, dean of the law school of the University of Southern California, who is president of the conference, explained that the California conference, which meets annually, always chooses a general theme around which to base its discussions. The topic this year was chosen in the belief that bringing social workers, lawyers, and local government officials into better relations for understanding the problems of one another will result in better coöperation and more effective work.

The conference Section of Public Health under the chairmanship of Dr. John L. Pomeroy, health officer of Los Angeles County, will present a program especially interesting to doctors, nurses, medical social workers, hospital administrators, and local government officials. On Wednesday, May 14, with Dr. Aaron M. Rosanoff presiding, "Mental Hygiene and Endocrinology" will be discussed under the leadership of Doctors Edward H. Williams and Charles L. Bennett. Doctors Herman Adler and Williams Engelbach will be the consultants.

On Thursday, May 15, with George B. Mangold, Ph. D., as chairman and Dr. Paul Popenoe as consultant, the subject will be "Practical Eugenics." Dr. Adelaide Brown, Dr. Margaret Smyth, Mrs. Kemper Campbell, and Nadine Kavinoky will lead the discussions. Dr. Walter M. Dickie will preside over the session devoted to the discussion of county health units. Doctor Pomeroy will be the consultant. The discussion leaders will be Dr. Percy Magan for the



medical profession, Miss Zdenka Buben for the medical social worker, and Dr. Guy S. Millberry for the dental profession.

On Saturday, May 17, the subject will be "The Cost of Medical Care." Dr. William P. Shepard will preside and a member of the national committee, to be announced later, will act as consultant. Dr. John Ruddock will present the point of view of the private practitioner, Miss Marguerite Spiers that of the hospital social worker, Miss D. Dean Urch the viewpoint of the nursing profession, and Dr. Walter H. Brown that of the public health official.

One of the general sessions of the conference to be held the evening of May 16 will be addressed by Dr. Frederick H. Allen, director of the Philadelphia Child Guidance Clinic, who is directing the mental hygiene survey being made under the auspices of the California State Department of Social Welfare. Doctor Allen, a graduate of the University of California and of the Johns Hopkins Medical School, will speak on "What Is Mental Hygiene." Other speakers at the general sessions will be Justin Miller, who will speak on "Social Progress and the Law"; Jack Black, author of "You Can Win," who will speak on "Law and the Criminal"; and Frederic P. Woeller, whose subject will be "American Objectives."

**Meeting for Study of Goiter.**—The American Association for the Study of Goiter will hold its annual meeting in Seattle, Washington, July 10, 11, 12, 1930. There will be thirty-three papers covering all phases of the goiter problem, delivered by men from all sections of the United States. The program has been arranged by choosing speakers from as many parts of the country as possible in order to give a representative cross section of the problems coincident to the study of goiter in America.

All the hospitality that Seattle can muster has been promised to those who attend the meeting by the vice-president, Dr. J. Tate Mason, under whose direction the meeting is being conducted.

**Exhibit of Bibliographical Interest at University Medical Library.**—In connection with the four hundredth anniversary of the publication of Fracastoro's poem, "Syphilis sive Morbus Gallicus," in 1530, an exhibit of material relating to this poem is on display in the University of California Medical School Library.

**Library of Medical and Dental Schools of University of California.**—Arrangements have been completed for the consolidation of the libraries of the Medical and Dental schools of the University of California on the Parnassus campus in San Francisco. The combined libraries will be housed in a completely remodeled library room in the Medical School building and will be conveniently located and arranged for the students and staffs of the various departments of the University of California on the Parnassus campus. The combined medical and dental libraries will place the resources of over 35,000 volumes and over 450 current periodicals relating to medicine and dentistry at the disposal of the two professions in the State of California. A packet library service is provided by which any properly qualified physician or dentist or medical or dental institution may obtain books for a ten-day period subject to carriage charges.

In order to make the library as useful as possible to those who desire to work in it, the books have been arranged in cubicles so that all of the significant literature relating to a special field may be found close at hand to the table at which the individual may be working. The total number of medical and dental periodical files, exclusive of government and institutional reports, numbers over 750 titles of which more than 300 are in complete sets.

**American College of Physicians.**—The American College of Physicians will hold its fifteenth annual clinical session at Baltimore, Maryland, from March 23 to 27, inclusive, 1931. The Lord Baltimore Hotel will be headquarters.

Dr. Sydney R. Miller of Baltimore, as president, will have charge of the selection of the general scientific program. Dr. Maurice C. Pincoffs of Baltimore has been appointed by the board of regents as the general chairman of the session, and will make all local arrangements, including the making up of the program of clinics. Business details will be handled by the executive secretary, Mr. E. R. Loveland, from the college headquarters, 133-135 South Thirty-sixth Street, Philadelphia, Pennsylvania.

**Nineteen Hundred and Thirty Is a "Measles Year."** Since the first of January nearly five thousand cases of measles have been reported in California. Every third or fourth year a new group of children who have no immunity to measles contract the disease, causing the number of cases reported to mount in a flare-up of extensive proportions. It is apparent that the year 1930 is one of these "measles years." As soon as the new fuel becomes consumed the outbreak will die down, only to flare up again three or four years hence, when a new group of nonimmune children becomes infected. Health officers throughout the state are cautioned to use every available method for protecting very young children against this disease. The complications that occur with measles in children under one year of age very often prove fatal. Because of its easy communicability, measles is extremely difficult to control. Most of the responsibility in the prevention of measles rests with parents who fail to prevent contact of young children with known cases of the disease. Following are the numbers of cases reported this year: January, 2797; February, 3899; March to March 18, 3604.

**Lepers Removed to Federal Leprosarium.**—Eleven lepers from eight California counties were transferred to the Federal Leprosarium at Carrville, Louisiana, on February 21. Twice each year leprosy patients who have been discovered in California communities are transferred in a special car, through coöperation with the federal government, to the leprosarium at Carrville. The patients which were moved last week came from the following counties: San Joaquin, Solano, San Francisco, Madera, San Luis Obispo, Monterey, Los Angeles, and Orange.

**Examination for Laboratory Technicians Announced.** The next examination for certificates of proficiency for laboratory technicians is scheduled for May 8 in Los Angeles and May 10 in Berkeley.

Separate examinations are given for, and separate certificates issued for work in serology, bacteriology, parasitology, and biochemistry. The latter certificate, for convenience, covers all clinical laboratory procedures not included under bacteriology, serology, and parasitology. Each type of certificate entitles the holder to engage in the line of work covered by that certificate only.

Only workers in official public health laboratories and in clinical laboratories approved by the State Department of Public Health are required to hold the certificate of proficiency.

Persons desiring to take these examinations should write to Dr. W. H. Kellogg, Chief, State Bacteriological Laboratory, Berkeley, for application forms. All applications must be mailed on or before May 1.

#### Total Deaths with Rates, 1920-1929, for California

Year	Total deaths	Rate per 1000 population
1920.....	47,124	13.5
1921.....	47,379	13.2
1922.....	51,968	14.1
1923.....	54,416	14.3
1924.....	56,751	14.5
1925.....	56,707	14.1
1926.....	58,742	14.2
1927.....	61,430	14.5
1928.....	66,249	15.2
1929.....	65,363	14.7

Dr. R. W. Binkley has been appointed city health officer of Selma, Fresno County, to succeed Dr. C. B. Cowan.



## CLIPPINGS FROM THE LAY PRESS

### Cerebrospinal Fever

Editorial reference is made in this issue of CALIFORNIA AND WESTERN MEDICINE of a special article by Dr. J. D. Geiger of the Hooper Foundation, and of the clipping on cerebrospinal meningitis which follows:

"Gaining by leaps from spring to spring, the dreaded cerebrospinal meningitis has increased nearly 400 per cent in the United States in four years, according to statistics of the Public Health Service.

"At the same time it is announced that Dr. Sara Branham of the United States Hygienic Laboratory has succeeded in isolating a hitherto unknown fifth variety of the meningococcus bacterium which attacks the membranes of the brain and spinal column, causing an inflammation which often results in death or permanent disability.

"Meningitis always has its greatest run in the late winter and early spring, when common colds are most prevalent and the resistance at a low ebb. But its distribution from year to year still is a mystery to the medical profession which the new-found bacterium may help solve.

### New Wave Under Way

"Apparently, the Public Health Service statistics show, the disease runs in waves. The first available figures are for 1910, with a death rate of four in a million. It increased steadily to a peak in the war year of 1917 with a death rate of thirty-nine in a million, declining to ten in a million during 1922. In 1927, with a spring peak of about eighty cases, the death rate had come up again to sixteen and apparently to the start of another wave.

"That is the latest year for which the actual death statistics are available. But in 1928 the cases reported had increased to a peak of 170 in a week, a 100 per cent increase over the previous peak. Last year there was a peak of 320 and this year it rose to 340.

### Seasonal Decline

"For the last two weeks there has been the characteristic seasonal decline; the rate actually is small compared with such epidemics as diphtheria and measles, with thousands of cases reported a week at this time of year. But the startling increase in meningitis has physicians worried.

"Public health officials are uncertain whether it is a disease that moves in waves or whether it actually is gaining a stronger foothold in the population at large. It is peculiar in that there are many more carriers of the disease than victims. During a local epidemic meningococci are found in more well than sick persons. The carriers, unaffected themselves, have no way of knowing that they are potential menaces to their neighbors. They have either an inherent or acquired immunity. It is possible, it is pointed out, that all these carriers have had the disease in a mild form under such favorable conditions that they did not know they were sick, and hence have built up a resistance to any further infection.

### Numerous Serums

"During the last few years several meningitis serums have been made, but the results have been disappointing.

"When an epidemic breaks out local physicians have no way of telling which variety is causing the trouble. Local areas seem to have their own varieties. One of them is practically confined to Illinois. Some European varieties do not answer American descriptions and may not have crossed the Atlantic.

"The disappointing results of present serums, it was pointed out, may be due to the fact that the right variety has not been included.

### Peru Indians Make Jungle Ants Martyrs for Surgery\*

"The use of 'surgical ants' with powerful jaws to stitch the wounds of human beings and other primitive medical practices developed by the Indians living far in the interior of Peru are described in a report received today at Field Museum of Natural History from the Marshall Field expedition to the Amazon.

"Llewellyn Williams, leader of the Peruvian division of the expedition, has just returned to Iquitos after a collecting trip along the Amazon and some of its tributaries which took him as far as the Brazilian border. Parts of the regions he explored are believed never to have been entered by white men before.

### Natives Original

"The natives of the equatorial forest show great originality and dexterity in the treatment of wounds and illness," writes Mr. Williams. "Trees, shrubs, and plants with medicinal properties are widely employed, and a surgical handicraft in which certain insects are used has been developed.

"In the case of a gaping wound, a certain ant which has very powerful jaws is sought, and the ant is made to bite the severed edges of the cut skin and thus bring them into juxtaposition. In the operation the ant-surgeon loses its own life, for after it has drawn the skin closed with its jaws, its body is snapped off and the lifeless head remains with its death grip on the skin until the wound is healed. Sometimes these Indians are found with half a dozen of these ants' heads holding a large wound closed.

"After intertribal battles in which fighting is done with axes and machetes or bush knives, many of the warriors return home with deep, ghastly and apparently fatal wounds. The women, however, are usually successful in treating these wounds. After bathing them, they apply ginger as a local anesthetic. Then a plaster is made from a pulp of a weed known as "Santa Maria," and the wound is bandaged with a dried banana leaf. In a week or so most of the wounds heal. Sometimes the crushed body of a certain ant is applied as a salve. The injured men are placed on a diet, eliminating salt and fats, and made to drink large quantities of an infusion prepared from the bark of a tree.

"Long thorns are sometimes used as surgeon's needles. The skin at one side of the opened wound is pierced with the thorn and it is then thrust across to and through the opposite skin edge, the protruding end of the thorn being fastened with string and left there until the two edges have fused.

### Burrow in Flesh

"In the wet lowlands there is a female jigger or burrowing flea which buries itself in one's flesh. There its body swells and becomes globular, being distended with a huge quantity of tiny eggs. The natives remove this by working carefully around the insect's body with a needle. Skill is necessary to avoid breaking the egg sac, for if a single egg is left in the wound the operation is valueless.

"There is also a worm which burrows itself into the legs of its victims, forming a swelling like a boil which breaks, and then the worm protrudes its head. Any attempt to drag it out suddenly fails, as it tears. The natives draw a few inches out carefully day by day, rolling the exposed end around a small piece of wood. Much delicate manipulation is required, as this entozoön ranges from six to ten feet in length."

## TWENTY-FIVE YEARS AGO \*

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. III, No. 5, May 1905

*From some editorial notes:*

... *Insurance Examiners.*—The journal very gladly publishes, on page 160, a letter from the secretary of the Placer County Medical Society on the subject of small fees from large companies for life insurance examinations. Several times has the journal commented on this subject and urged that physicians throughout the state refuse to make such examinations for a fee less than \$5. . . .

... *Hall of Exhibits.*—The journal for July of last year commented upon the disgraceful character of the "Hall of Exhibits," the side-show of the American Medical Association. A member of the Publication Committee was taken to task for this editorial utterance, the argument being that the trustees of the American Medical Association have nothing to do with this "hall"; that it is always arranged for by the local Committee of Arrangements; that this committee must provide (and pay for) the various meeting places required, and that consequently the "hall of (disgraceful) exhibits" has to be. That a large percentage of the remedies exhibited are "nostrums"

\* This column strives to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

\* See editorial on page 359.



(secret formula "proprietary" preparations), is not denied; that to "promote the use" of such stuff is "derogatory to professional character" is also not denied. . . .

. . . *The Wily Politician.*—The physician is the only breadwinner whose duty, conscientiously lived up to, is to work against his own business interests. The whole history of medicine shows an unending effort on the part of its followers to prevent disease; to prevent epidemics; to prevent accidents; and yet it is from the existence of disease and accidental injury that the physician derives his meager support. . . .

*From the address of the president, Frank L. Adams, M. D., Oakland, thirty-fifth annual meeting of the Medical Society of the State of California:*

Herbert Spencer has divided education into mental, moral, and physical, and has shown in his masterly way that a perfect physique and physical well-being are the foundations for the other two. . . .

. . . The physician, by reason of his profession, his general education and special training, owes a sacred duty to the state to advance the well-being of his fellow man. . . .

*From an article on "Some Notes on Recent Progress in the Surgery of the Ear and Brain" by A. Barkan, M. D., San Francisco:*

. . . In the main this very informal communication embraces personal experiences during my attendance of the British Medical Association meeting, July last, in Oxford, and last year's International Congress of Ear Surgeons in Bordeaux. In Oxford Prof. MacEwen delivered the general oration on surgery. . . .

. . . The part of his address which I desire to bring to your special notice dealt with localization of brain abscess arising from primary pyogenic cranial lesions, the determination of abscess versus meningitis and the results achieved in dealing surgically with tubercular meningitis. . . .

*From the minutes of the thirty-fifth annual session of the Medical Society of the State of California, Riverside, April 18, 19, 20, 1905:*

The session just held was one which will long be remembered by those who attended it. The registration was the largest recorded for a number of years, 230 having signed the register. . . .

#### *From medical society reports:*

*Alameda County.*—Following its most excellent custom of previous years, the Alameda County Medical Society gave a dinner on the evening of April 8 and invited the officers of the state society to be its guests. The special feature this year was that the dinner was given to Dr. Frank Adams, the retiring president of the state society. Good cheer and good fellowship were the only topics permitted discussion, under the rules, and they were well discussed. . . .

*Humboldt County.*—It was also decided to send a telegram to the Governor asking him to sign the bill appropriating \$150,000 for a state hospital for the tuberculous poor, but at a later hour it was reported that the bill had already been vetoed and the message was not sent. . . .

*The California Academy of Medicine.*—Two Unusual Cases of Gastric Carcinoma. Dr. W. F. Cheney reported two cases of gastric carcinoma, which were interesting because they produced no symptoms referable to the stomach. . . .

. . . Bicornate Uterus. Dr. George Somers reported two cases of bicornate uterus. . . .

. . . Intestinal Obstruction from Meckel's Diverticulum. Dr. Emmet Rixford demonstrated a Meckel's diverticulum which had been the cause of an intestinal obstruction in a child. . . .

## DEPARTMENT OF PUBLIC HEALTH

*By W. M. DICKIE, Director*

**Recent Advantages in Medical Entomology.**—Rocky Mountain Spotted Fever.—This febrile disease, transmitted by ticks and having its center of endemicity in the Bitter Root Valley of Montana but appearing as far west as California, occasionally has been the focus of extremely interesting investigations. In addition to the Rocky Mountain spotted fever tick (*Dermacentor venustus*), it is known now to be transmitted by the rabbit tick (*Haemaphysalis leporispalustris*) which is instrumental in spreading the infection from rabbit to rabbit, thus increasing the number of reservoirs at which the *Dermacentor* ticks may be infected as young ticks to carry the infection over to the larger animals, such as the Rocky Mountain goat and eventually to man.

Studies of the virus show striking differences in its manifestations in the tick and in man. The tick virus, properly treated, has immunizing value for human beings which is lacking in the human virus. The tick virus apparently requires periodic activation in the form of a blood meal. It is present in the salivary glands and feces of infected ticks, but is virulent only after they have been sucking blood for a time. This is of public health significance in that if ticks are removed from human beings at frequent intervals no infection would take place even though infected ticks had actually been sucking blood for a period of an hour or even slightly longer.

**Yellow Fever.**—With the discovery that certain monkeys could be infected with yellow fever, enormous progress has been made in settling some of the baffling questions that have handicapped man's attempts to stamp out this scourge of the tropics. In addition to the well-known yellow fever mosquito (*Aedes aegypti*), long thought to be the only source of transmission, six other species have been shown capable of performing this unwholesome service. The blood of infected monkeys has also been shown to contain a virus capable of infecting a healthy subject through the unabraded skin; a costly bit of information for which three workers at the International Health Board's laboratory in West Africa—Stokes, Young, and Noguchi—undoubtedly paid with their lives.

**Antilarval Measures in Malaria.**—The work of the Italian Government in coöperation with the International Health Board in demonstrating the possibility of accomplishing absolute control of malaria by larvicidal measures alone is of inestimable consolation to those entomologically minded public health workers who have battled for the importance of insect control rather than carrier control in antimalarial endeavors. By controlling the anophelines surrounding two towns, these workers were able to convert veritable pest holes of malaria into summer resorts and nationally recognized health centers in the course of two years. On the other hand, intensive treatment with quinin in another town where the mosquitoes were not controlled failed to check the disease; in fact, the rate actually increased. It was also observed with considerable satisfaction that in districts where antilarval measures were being used, treatment by quinin was far more effective, explained, no doubt, by the relative freedom from reinfection in these areas.—Stanley Freeborn, M. D., University of California.



## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, M. D.  
Secretary of the Board

News Items, May 1930

**Narcotic Warning.**—For many years the directory published by the Board of Medical Examiners of the State of California has carried very definite information regarding narcotic regulations, both state and federal; also a copy of the Medical Practice Act. Despite numerous warnings, investigation reports show that some duly licensed physicians and surgeons in California are allowing their sympathies to run away with their better judgment by writing prescriptions for narcotic addicts, in violation of the law. As related in prior warnings, this constitutes a violation of both the Medical Practice Act and the State Poison Law and is punishable. Any physician following this procedure may expect to be subject to arrest by the narcotic inspectors and also subject to a citation calling him before the Board of Medical Examiners to show cause why his license to practice in this state should not be revoked. Physicians are also warned to safeguard their narcotic prescriptions by writing in ink and, following the Roman numerals, the word representing the figure, cases having recently been discovered where a prescription written, say for fourteen quarter-grain tablets has been raised by prefixing two or three additional Roman numerals representing ten, so that the prescription reads, say thirty-four. Narcotic regulations are so embarrassing addicts and peddlers that innumerable instances of forged prescriptions are being uncovered. Again we reiterate our prior warnings against any physician and surgeon having printed on his prescription blank his Harrison narcotic registration number, for this makes forgery easy for both the peddler and the addict.

Authorized to slash red tape and put real "teeth" in the Federal Government's drive against the narcotic drug menace, Harry D. Smith was sworn in yesterday as Pacific Coast Supervisor of Federal Narcotic Enforcement. . . . The office he holds is a newly created one with jurisdiction over California, Washington, Oregon, Nevada, Montana, Idaho, Alaska, and Hawaii. . . . The supervisor has sweeping powers, delegated by Commissioner of Prohibition and Narcotics J. M. Doran. With Smith on duty here, it will no longer be necessary for local officials to obtain authorization from Washington before making a move and this will eliminate delays which in the past frequently gave violators a chance to escape arrest. There will be no change in the narcotic personnel here, according to Smith. He praised Harry V. Williamson, chief of the local division, for his work in preparing the "Black Tony" Parmagini case (San Francisco Examiner, April 18, 1930).

Initiative petitions are being prepared to place on the November ballot amendments to the Chiropractic Licensing Board Act that originally were proposed by Initiative . . . (San Francisco Chronicle, March 12, 1930).

Mark L. Emerson, M. D., was recently appointed city health officer at Oakland, taking the office vacated by Charles R. Fancher, M. D., who resigned to become city commissioner of that city.

Dr. F. P. Fuller, 523 West Sixth Street, is charged with failure to report all tuberculosis cases treated in his office, a violation of the Public Health Law, in a misdemeanor complaint issued by the district attorney yesterday (Los Angeles Times, March 16, 1930).

Accused of violating the Public Health Law, Dr. F. P. Miller, 523 West Sixth Street, was named in a district attorney's complaint issued today by Bonner Richardson, chief complaint deputy. The complaint, which was signed by Carl R. Williams, charges that Doctor Miller, a tuberculosis specialist, "in defiance of regulations persists in failing to report a majority of his cases in contagious stages of the disease" (Los Angeles Record, March 15, 1930).

A bunco game in which several score of San Francisco nurses were alleged to have been duped was disclosed by reported victims to the *News* today. Hundreds of dollars were lost through a fictitious hospital organization headed by a man posing as Dr. George Miller, it was charged. Detective Sergeant Thomas Curtis, investigating the operations of "Miller," found that an office had been outfitted at 112 Market Street. Clients were lured there by an advertisement. "Miller" interviewed applicants and is said to have secured from \$10 up for purchase of uniforms and fare to the sanitarium, which he declared was near Watsonville. More than one hundred are said to have sought employment. . . . Investigation discloses that "Miller" occupied the office for four days, then disappeared. He told women who paid fees to meet him last Sunday at the offices of a stage company and they would proceed to Watsonville. Though the nurses crowded the stage depot, "Miller" failed to appear . . . (San Francisco News, February 4, 1920).

The case of Dr. Edwin L. Mott, charged with a misdemeanor, failure to report to the police that he had treated a patient suffering from a gunshot wound, was taken under advisement yesterday afternoon, following trial before Police Judge J. H. Crichton without a jury. . . . Doctor Mott said on the stand he did not know the provisions of the law, which went into effect on August 15, last . . . (Fresno Republican, April 8, 1930).

According to reports, Nell E. Anderson, licensed cosmetologist who was advertising plastic surgery, pleaded guilty in the courts of Los Angeles on April 1 to a charge of violation of the Medical Practice Act and was sentenced to serve 180 days in the city jail, suspended for six months and defendant placed on probation.

Dr. Francis James Bold, Whittier physician, yesterday was cited for the second time to appear before the State Board of Medical Examiners to answer charges of unprofessional conduct, growing out of the alleged performing of an illegal operation. The hearing was set for July 8 in San Francisco (Los Angeles Illustrated Daily News, April 1, 1930). (Previous entry, April 1930.)

Marie Caron, midwife, whose license was revoked by the Board of Medical Examiners July 17, 1929, is reported to have withdrawn her appeal from the recent Los Angeles conviction on a charge of practicing medicine on a midwife license and is now serving a six months' jail sentence.

Dr. Motoharu Chono of Japan took the State Medical Board examinations four times and failed each time. Wishing to practice in California, he went to Nevada, where he says he got a license on which he sought reciprocity when he returned several months ago to Florin. Today another chapter is being written in Chono's efforts to practice medicine among his countrymen. He is being tried in the Justice Court at Elk Grove on the charge of practicing medicine without a license . . . (Sacramento Bee, April 9, 1930).



Investigation reports show that Armando Dominguez, a persistent violator of the Medical Practice Act in San Bernardino County, was again arrested on April 1 on a charge of violation of the Medical Practice Act. (Previous entries, October and November 1929.)

Dr. I. S. Egan, who has been employed for some time in the Weimar Joint Sanatorium as a physician, was arrested Monday on complaint of J. W. Davidson, special agent of the Board of Medical Examiners of the State of California, and F. J. O'Farrell, narcotic inspector of the State Division of Narcotic Enforcement, Department of Penology, on two charges. . . . Pleaded guilty to both charges. The judgment of the court was that he pay a fine of \$100 on each count and, in lieu of a fine, be imprisoned for sixty days in the county jail. The court then suspended both fine and prison sentence until the first of April to allow Egan the opportunity of leaving the state . . . (Colfax Record, March 28, 1930).

Dr. Glen G. English, thirty-two, of 1053 Edinborough Avenue, arrested early yesterday after a scuffle in which he was said to have attempted to choke the officer, yesterday afternoon was named in a drunk-driving complaint issued by Deputy District Attorney Bonner Richardson. . . . He was taken to Dickey & Cass Hospital in Hollywood, where physicians declared he was under the influence of liquor . . . (Los Angeles Illustrated Daily News, March 15, 1930).

Dr. St. Louis Estes, the man who started a not inconsiderable portion of the population of the United States to chewing on cabbages, gnawing carrots and nibbling lettuce, was yesterday sued for \$500,000 alimony by Mrs. Clara Estes, who says she is his first wife and the mother of his three legitimate children. . . . Mrs. Estes' complaint charges that she and the dentist expert lived happily in Chicago until 1922, at which time Doctor Moraine entered their lives. . . . Doctor Estes first sprang into the public eye eight years ago, when he asserted any bald man could grow hair on his head by sticking to a prescribed diet. Later in his lectures he extended the list of human ills to be cured by his raw vegetable diet and said it was a mistake for any man to die before attaining an age of 125 years. In San Francisco last year Doctor Estes became embroiled in difficulties with the State Board of Medical Examiners. It was charged that, although Doctor Estes was a licensed dentist, he was not a physician or surgeon and that this fact was not made clear in his advertisements with which he attracted throngs to his lectures. . . . The charge against Doctor Estes was dismissed in the Superior Court and he immediately retaliated with a \$500,000 civil action against those responsible for his arrest. This suit has never come to trial. Doctor Estes now makes his home in Los Angeles (San Francisco Chronicle, February 4, 1930).

Reports relate that Lucille Francis, licensed cosmetologist, who was advertising "surgery face lift," pleaded guilty on March 28 in the courts of Los Angeles on a charge of violation of the Medical Practice Act and was sentenced to pay a fine of \$100 or serve twenty-five days in the city jail, sentence suspended for two years.

Dr. J. G. Ham of San Bernardino, who pleaded guilty to a charge of conspiracy to perform an illegal operation, was sentenced to two years in the county jail today by Superior Judge Charles L. Allison as a condition of probation given the defendant. The court characterized the case as a "very difficult matter for me" and continued in addressing the defendant, "When you are sober and in your right mind, apparently there is little danger of your doing wrong, but when you are drinking or under the influence of in-

toxicants, your sense of moral responsibility appears greatly weakened." Doctor Ham may at the expiration of one year of his term apply for modification of the jail sentence, the court said, but the first year must be served before modification application will be considered . . . (San Bernardino Telegram, April 5, 1930). James G. Ham's license to practice as a physician and surgeon in California was revoked October 18, 1928, having been found guilty of habitual intemperance. (Previous entries, May, August, and September 1926; December 1928.)

Maurice LeBelle, advertising Chirothesian treatment in Los Angeles, was found guilty on April 10 in the courts of Los Angeles on a charge of violation of the Medical Practice Act, according to investigation reports.

"Dr." Arthur C. McCowan, who jumped bail in Oakland recently after his arrest for violation of the State Medical Practice Act, has been identified as Arthur E. Webb, former convict in two federal penitentiaries. . . . Webb, who posed as Doctor McCowan, a physician, in Oakland, fled California while at liberty on bail after his arrest as a bogus doctor and since then has been arrested in Portland on a theft charge. . . . The real Doctor McCowan (McCown) is a physician living near Portland, whose credentials were stolen in a house burglary. Medical officials also charge that Webb posed as a doctor in Alaska and has served terms in McNeil and Leavenworth penitentiaries (San Francisco Call-Bulletin, March 8, 1930). Information recently received from the Oregon Board of Medical Examiners relates that the investigator for said board had obtained from this impostor the medical credentials found on his person at the time of arrest and had returned same to the bona fide Arthur C. McCown, well-known practitioner of Houlton, Oregon.

According to reports, Mrs. Versa I. McKinney was arrested in Los Angeles on March 27 on a charge of alleged abortion and committed to jail in default of \$250 bail.

Rudolph R. Pohlman, advertised himself as a scientific health expert, and holding a diploma or certificate from the "Health Center Institute of Drugless Healing," was reported to have pleaded guilty to a violation of the Medical Practice Act in Santa Monica on April 3 and sentenced to pay a fine of \$100, which sentence was suspended and defendant placed on probation for two years.

Opening a determined drive against narcotic users and peddlers, state and city narcotic officers last night coöperated in sweeping raids in which five persons, of whom three were physicians, were arrested. Dr. Samuel Cotterell, forty-five, of 2502 South Central Avenue, Dr. Walter W. Hopkins, forty-seven, of 4018 South Central Avenue, and Benjamin Colly, twenty-nine, proprietor of a pharmacy at Twenty-fifth Street and Central Avenue, all negroes and said to comprise an active narcotic ring, were taken in one raid. Doctor Clayton Allen and his wife, Mrs. Zula Allen, were arrested at their home, 1806 West Vernon Avenue in a second raid and were charged with violation of the State Poison Act, a felony. A quantity of narcotics was confiscated (Los Angeles Illustrated Daily News, January 31, 1930).

Thomas R. Hart, former deputy district attorney; Elon G. Galusha and Dr. Noah L. Weiner yesterday were acquitted by Superior Judge Wood of a charge of conspiracy to commit extortion of \$5,000 from Fred Reed, inventor and operator of a Hollywood Sanitarium. The three were asserted to have plotted to get \$5000 from Reed in a threat to cause his prosecution on a charge of violating the Medical Practice Act . . . (Los Angeles Times, December 3, 1929).



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## TRUTH ABOUT MEDICINES

(Continued from Page 31)

dies, 1929, p. 73), 0.243 gram ( $3\frac{3}{4}$  grains) in 5 cubic centimeters of solution. Lakeside Laboratories, Inc., Milwaukee, Wisconsin.—*Jour. A. M. A.*, March 1, 1930, p. 634.

**Squibb's Dextro-Vitavose.**—A mixture of Squibb's vitavose (New and Nonofficial Remedies, 1929, p. 244), one part, and dextrose, two parts. E. R. Squibb & Sons, New York.—*Jour. A. M. A.*, March 29, 1930, p. 920.

## FOODS

The following products have been accepted as conforming to the rules of the Committee on Foods of the Council on Pharmacy and Chemistry of the American Medical Association:

**Peter Pan Bread** (P. F. Peterson Baking Co., Omaha).—A thoroughly baked white bread having a soft, velvety texture and sweet flavor.

**Clapp's Original Approved Baby Soup and Strained Vegetables** (Harold H. Clapp, Inc., Rochester, New York).—Baby Soup: A combination of beef juice and vegetables. Wheatheart Soup: A combination of wheat germ, vegetables, and cereals. Strained Vegetables: Spinach, wax beans, carrots, asparagus, peas, beets, prune pulp, apricot pulp, and tomatoes. In these products all possible food values are retained and the least amount of water is used in cooking.

**Checkr-Redi-Cooked Oats or Checkr Rolled Oats** (Ralston Purina Co., St. Louis).—Checkr-Redi-Cooked Oats have been precooked to bring out their mellow flavor and to make them quickly prepared and easily digested.

**Minute Gelatin** (Minute Tapioca Co., Inc., Orange, Massachusetts).—Pure granulated gelatin offered in convenient size cartons for household use.—*Jour. A. M. A.*, March 1, 1930, p. 635.

(Continued on Page 41)

## Suggest this Pure Fruit Juice, so rich in Food Values

**Y**OUNG and old relish the delicious mellow taste of '49 Brand California Grape Juice. For general diet and hospital use '49 Grape Juice is unsurpassed because of its high percentage of natural invert sugar, valuable mineral salts, and stimulating laxative properties.

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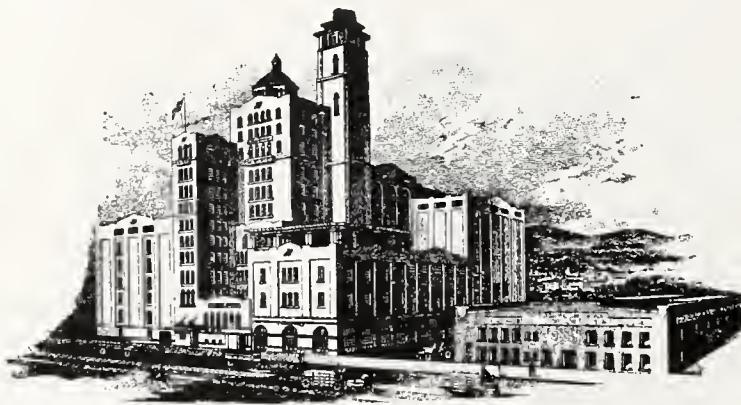
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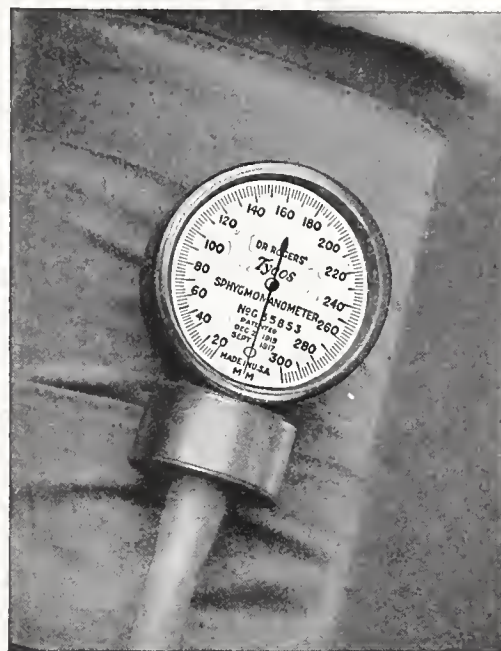
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Every *Tycos* Sphygmomanometer has adhered to an indisputable principle—that only a diaphragm-type instrument is competent for the determination of blood pressure. To faithfully record the correct systolic pressure, an indicator's accuracy must not be affected by the speed at which the armlet pressure is released, only a diaphragm instrument can guarantee this. To honestly give the true diastolic pressure, a sphygmomanometer must respond precisely to the actual movements of the arterial wall, again, only a diaphragm instrument can do this.

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Write for new 1930 edition of *Tycos* Bulletin #6 "Blood Pressure-Selected Abstracts." A great aid to the doctor who wishes to keep abreast of blood pressure diagnosis and technique.

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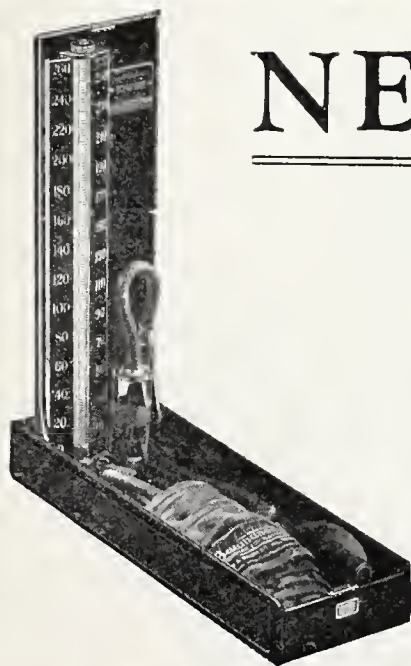
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### TRUTH ABOUT MEDICINES

(Continued from Page 35)

**Quaker Oats (The Quaker Oats Co., Chicago).—**Brands: Quick Quaker Oats; Rolled Quaker Oats; Mother's Oats; Quick Mother's Oats. Quaker Oats provides 50 per cent more protein than wheat, 60 per cent more than wheat flour, more than twice as much as rice; 100 per cent more than cornmeal. It is rich in minerals and vitamin B.

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**New Treatments for Cancer.**—Hanson reports results closely resembling those described by Coffey and Humber, following the administration of thymus extract. Sokoloff reports similar results, following the use of an extract of the suprarenal combined with iron. Charlton announces lytic effects on cancer cells following the administration of an extract of the omentum. The interest of the Coffey-Humber method, in its present stage of investigation, lies primarily in the fact that the available evidence seems to demonstrate a definite effect on cancer tissue as the result of injecting suprarenal extract into the body at points removed from the tumor.—*Jour. A. M. A.*, March 1, 1930, p. 639.

**Medical Publicity Bureau.**—In an article dealing with the subject of this caption that appeared in the

(Continued on Page 43)

**NOW... A World Mart  
of Surgical Supplies  
Brought to You...  
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For your convenience, Doctor, a complete stock of surgical equipment, instruments and supplies from the dominant foreign and domestic quality markets of the world has been concentrated in Los Angeles. Take advantage of this convenient source of supply.



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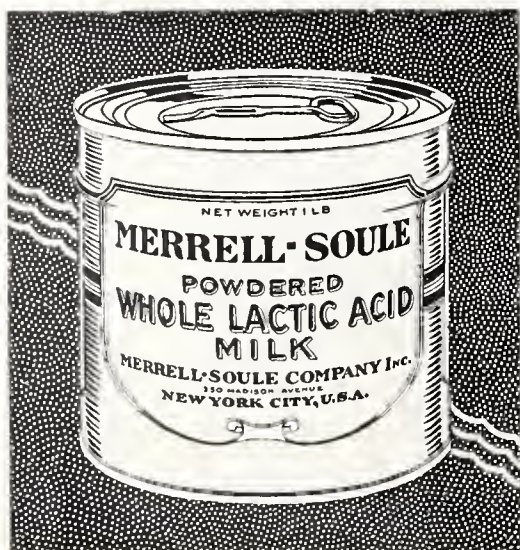
Physicians who are recommending Lactic Acid Milk for infant

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### TRUTH ABOUT MEDICINES

(Continued from Page 41)

journal December 7, 1929, the statement was made that Dr. William J. Robinson was the principal stockholder in this bureau. After the appearance of the article, Doctor Robinson wrote to the journal stating that the use of his name in this connection was without justification. A correction of this statement was published in the journal January 25, 1930, stating that the statement was incorrect. The journal now publishes, at Doctor Robinson's request, an affidavit from the doctor to the same effect.—*Jour. A. M. A.*, March 1, 1930, p. 652.

**Causyth.**—A number of German journals have contained more or less laudatory reports regarding Causyth, but these are not considered to present acceptable evidence for the value of the preparation. According to the advertising, Causyth is a "cyclohexatrienpyridinsulphonacid, derived from Pyrazol, the

(Continued on Next Page)

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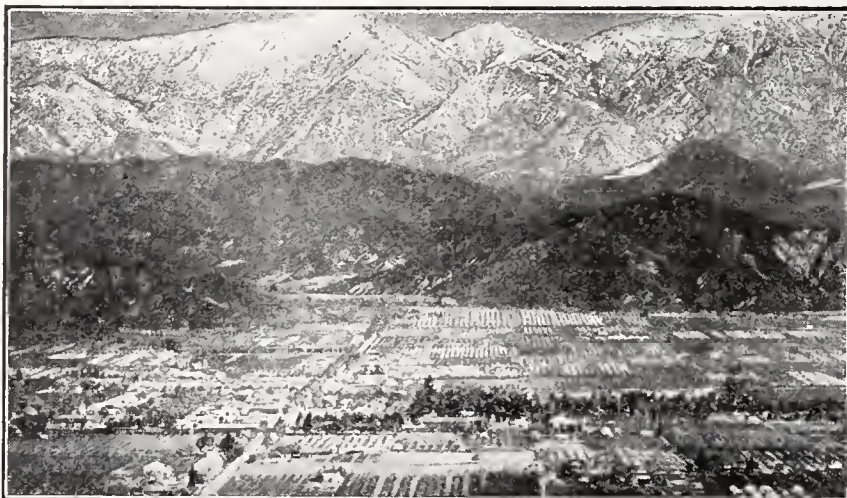
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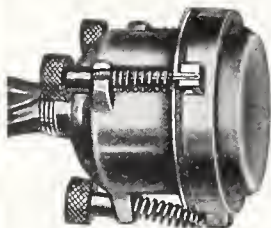
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### TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

formula being  $C_{22}H_{24}N_4O_5S$ ." The product has not been considered by the Council on Pharmacy and Chemistry nor has the Mallinckrodt Chemical Works, which exploits it by way of its Canadian branch "Mallinckrodt Chemical Works Limited of Canada," requested the Council to report on it. Apparently no reports have been published in American medical journals which are confirmatory of the German propaganda. A pharmacologist who has given much attention to the action of salicylates and other drugs used in the treatment of rheumatism reviewed seven of the eight papers which were referred to in an advertising circular. He held the evidence to be unsatisfactory and uncritical and no justification for the extravagant

(Continued on Page 49)

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Get this Nasal Powder  
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We want every physician to try Nichols Nasal Syphon Powder-It's new and unusually fine for use with the Nichols Nasal Syphon-or wherever nasal cleansing is indicated.

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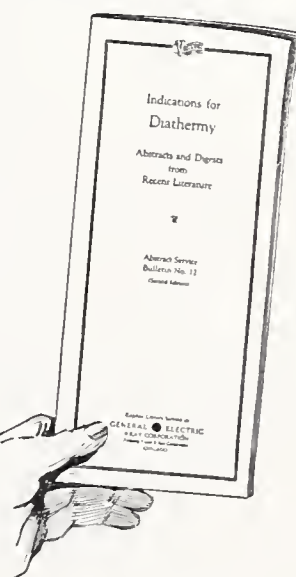
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Laboratories fully equipped for basal metabolism determinations, Wassermann reaction and blood chemistry, Roentgen and radium therapy.

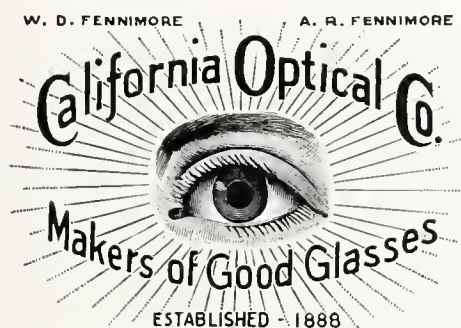


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This hearing device is equipped with a small inconspicuous earpiece and a powerful light-weight battery which can be easily concealed.

The Audiphone was developed in the Bell Telephone Laboratories, and is manufactured by the Western Electric Company—a strong guarantee of its reliability.

Full details or demonstration upon request



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### TRUTH ABOUT MEDICINES

(Continued from Page 44)

claims of the advertising.—*Jour. A. M. A.*, March 1, 1930, p. 656.

**Pneumococcus Vaccines Omitted From New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that increasing experience has failed to demonstrate the value of pneumococcus vaccine in the treatment of pneumonia, and the prophylactic value of the vaccine has not been conclusively proved. The Council came to the conclusion that the experience with this vaccine has not afforded acceptable evidence for its therapeutic usefulness and voted to omit it, with the accepted brands, from New and Nonofficial Remedies. In accordance with this action, the Council announces the omission of *Pneumococcus Vaccine Immunizing* (Gilliland Laboratories, Inc.); *Pneumococcus Vaccine* (Lederle Antitoxin Laboratories); *Pneumococcus Vaccine, Prophylactic* (Eli Lilly & Co.); *Pneumococcus Antigen* (Lilly); *Pneumococcus Vaccine* (National Drug Co.); *Pneumococcus Vaccine (Four Types)* (Parke, Davis & Co.); *Pneumococcus Immunogen* (Parke, Davis & Co.); *Pneumococcus Vaccine* (E. R. Squibb & Sons).—*Jour. A. M. A.*, March 8, 1930, p. 716.

**Tom Hayes—The Indecent Fraud of Archie T. Hay.**—Archie T. Hay, who did business from 189 North Clark Street, Chicago, under the trade name "Tom Hayes" has been selling on the mail-order plan a salve or ointment called "T. N. T. (Tom's New Treatment)" for cases of "lost manhood." The nostrum sold by Archie T. Hay was prepared for him, according to the government authorities, by Stearns and White, Chicago. The Postmaster-General declared the Tom Hayes business a fraud and debarred it from the mails.—*Jour. A. M. A.*, March 8, 1930, p. 735.

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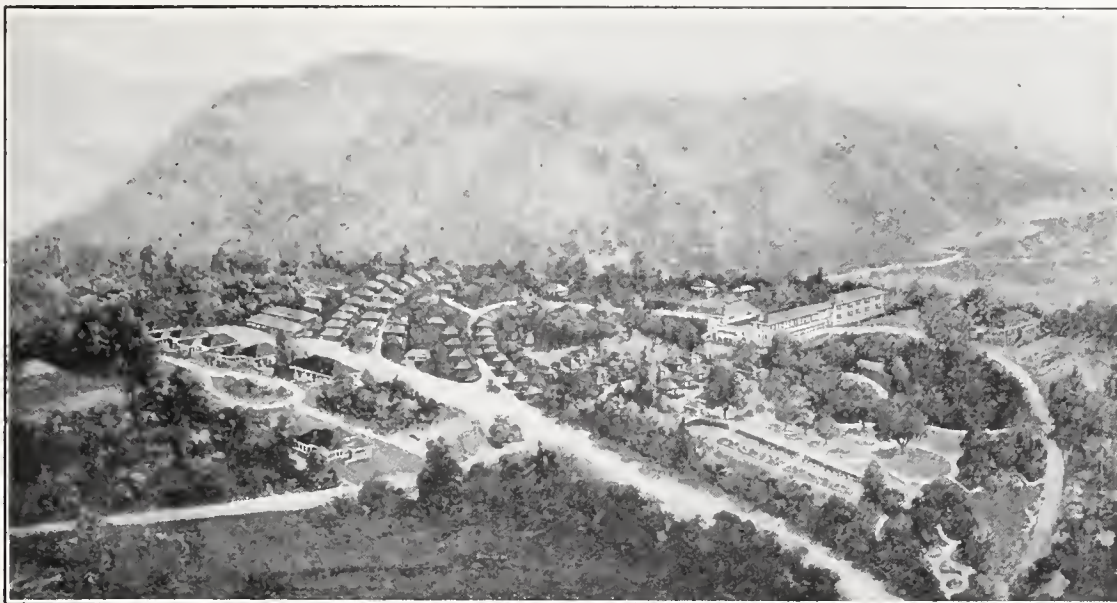
ming pools, gymnasiums, athletic fields, and other recreational facilities. For mothers there will be lectures and individual advice on child care, as well as suitable games and other forms of recreation, their children in the meantime being cared for in a special nursery.—*United States Department of Labor, Children's Bureau, Washington.*



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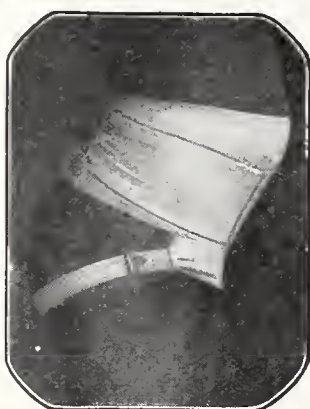
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Excerpts from American Medical Association Essentials for an Approved Clinical Laboratory

## DEFINITION

*"\* \* \* A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body."*

*"Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved."*

*"The housing and equipment should be sufficient to permit all essential technical procedures to be properly carried out."*

## THE DIRECTOR

*"The director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry or other allied subjects, for at least three years. He must be a man of good standing in his profession."*

*"The director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work."*

*"The director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports."*

*"The director may have assistants, responsible to him. All their reports, bacteriologic, hematologic, biochemical, serologic and pathologic should be made to the director."*

## RECORDS

*"Indexed records of all examinations should be kept. Every specimen submitted to the laboratory should have appended pertinent clinical data."*

## PUBLICITY

*"Publicity of an approved laboratory should be directed only to physicians either through bulletins or through recognized technical journals, and should be limited to statements of fact, as the name, address, telephone number, names and titles of the director, and other responsible personnel, fields of work covered, office hours, directions for sending specimens, etc., and should not contain misleading statements. Only the names of those rendering regular service to the laboratory should appear on letterheads or other form of publicity."*

## FEEES

*"\* \* \* There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group. \* \* \*"*

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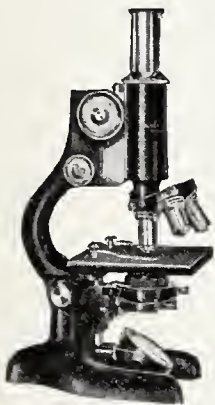
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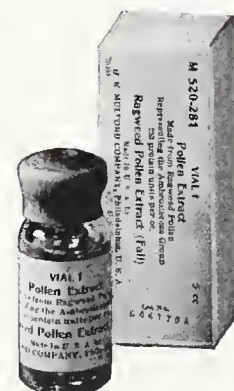
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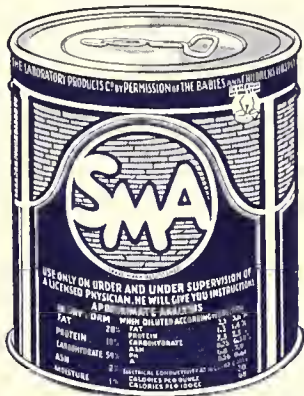


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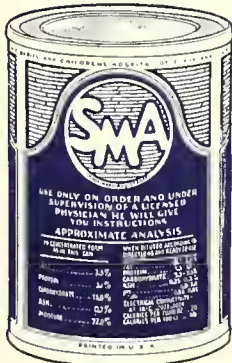


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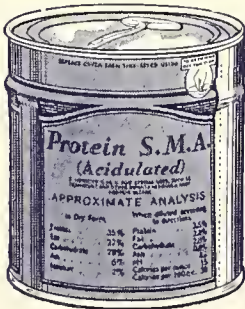
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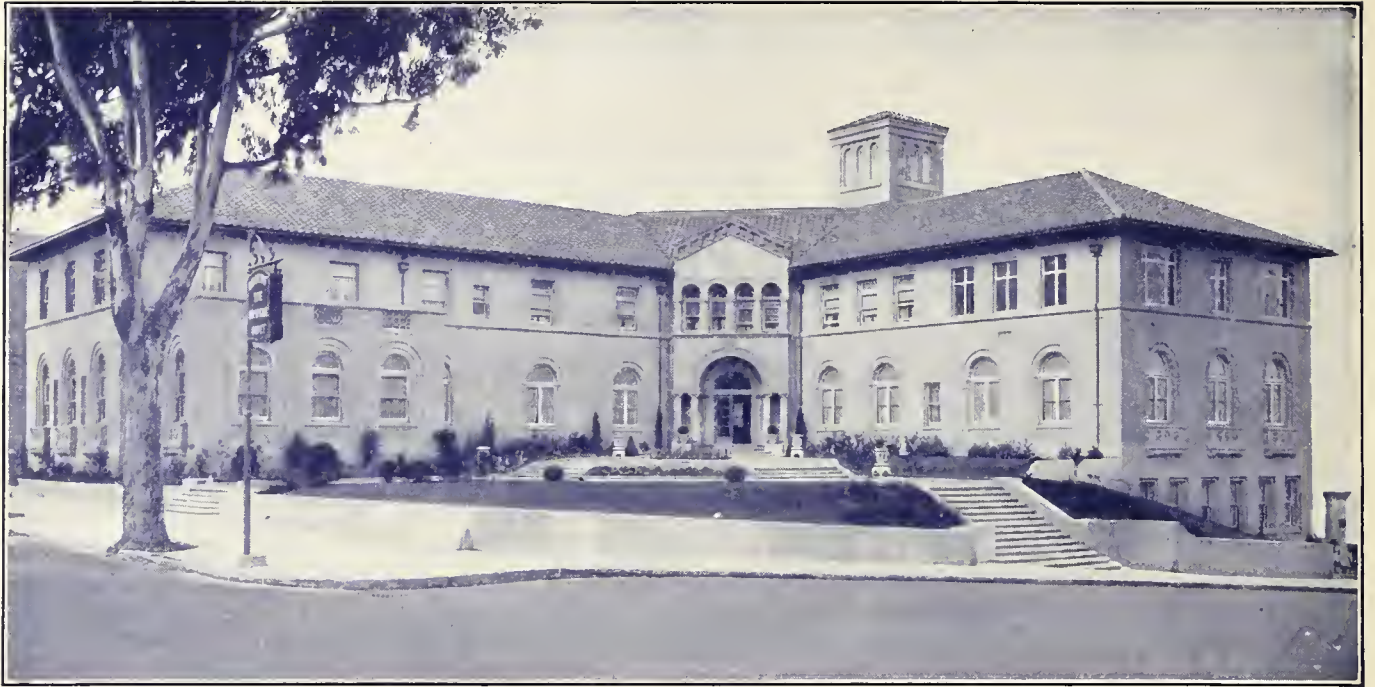
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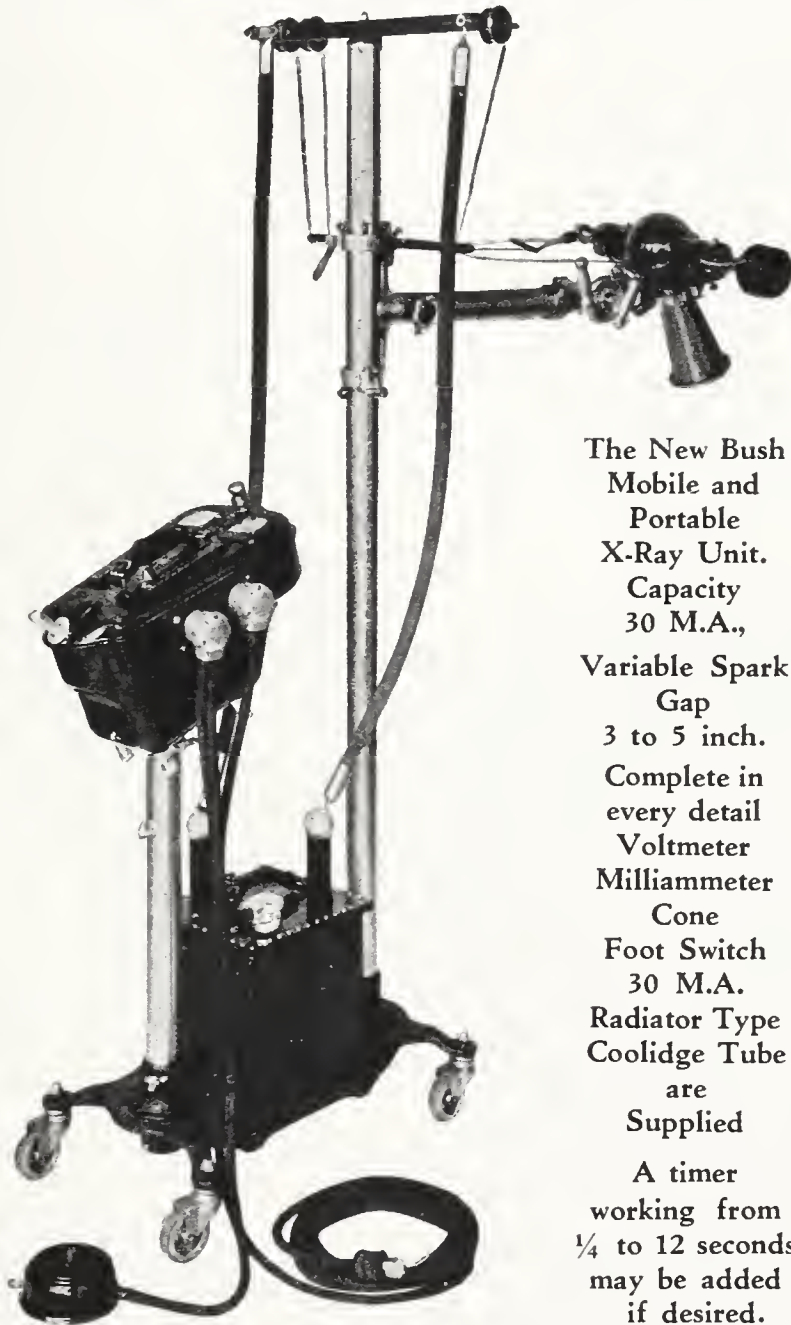
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Secretary, William H. Geistweit, Jr., 810 Medico-Dental Building, 233 A Street, San Diego.

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President, Harold K. Faber, Lane Hospital, 2398 Sacramento Street, San Francisco.  
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Secretary, Allen F. Gillihan, San Luis Obispo.

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Secretary, B. H. Page, 231 Second Avenue, San Mateo.

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Director, Walter M. Dickie, Berkeley.

**State Board of Medical Examiners**  
San Francisco, 623 State Building  
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Sacramento, 420 State Office Building  
President, P. T. Phillips, Santa Cruz.

Secretary, C. B. Pinkham, 623 State Building, San Francisco.

**Southern California Medical Association**  
President, Joseph K. Swindt, Pomona.  
Secretary, William J. Norris, 509 Medical Office Bldg., 1136 W. 6th Street, Los Angeles.

**California Northern District Medical Society**  
President, Orrin S. Cook, Mater Misericordiae Hospital, Sacramento.

Secretary, George H. Sanderson, 809 Medico-Dental Building, Stockton.

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J. U. GIESY, 701 Medical Arts Building, Salt Lake City.....Associate Editor for Utah  
Place of next meeting.....Salt Lake City, September 9-11, 1930

## Hospitals and Sanatoriums

The institutions here listed have announcements in this issue of CALIFORNIA AND WESTERN MEDICINE

<b>ALEXANDER SANITARIUM</b> Nervous and Mild Mental Diseases Belmont, Calif.	<b>FRANKLIN HOSPITAL</b> Limited General Hospital Fourteenth and Noe Streets, San Francisco	<b>SANTA BARBARA CLINIC</b> 1421 State Street, Santa Barbara
<b>ALUM ROCK SANATORIUM</b> For Treatment of Tuberculosis San Jose, California	<b>GREENS' EYE HOSPITAL</b> Consultation, Diagnosis and Treatment of Diseases of the Eye Bush and Octavia Streets, San Francisco	<b>SCRIPPS METABOLIC CLINIC</b> <b>SCRIPPS MEMORIAL HOSPITAL</b> La Jolla, San Diego, Calif.
<b>ANDERSON SANATORIUM</b> Mental and Nervous Diseases 2535 Twenty-fourth Avenue Oakland, Calif.	<b>JOHNSTON-WICKETT CLINIC</b> Anaheim, Calif.	<b>SOUTHERN SIERRAS SANATORIUM</b> Scientific Treatment of Tuberculosis Banning, Calif.
<b>BANNING SANATORIUM</b> Treatment of Tuberculosis and Throat Diseases Banning, Calif.	<b>JOSLIN'S SANATORIUM</b> Nervous and Mental Lincoln, Calif.	<b>SAINT FRANCIS HOSPITAL</b> Limited General Hospital Bush and Hyde Streets, San Francisco
<b>CALIFORNIA SANITARIUM</b> For the Treatment of Tuberculosis Belmont, San Mateo County, Calif.	<b>LAS ENCINAS SANITARIUM</b> Nervous and General Diseases Las Encinas, Pasadena, Calif.	<b>ST. JOSEPH'S HOSPITAL</b> Limited General Hospital Buena Vista and Park Hill Avenues San Francisco, Calif.
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<b>CHILDREN'S HOSPITAL</b> General Hospital for Women and Children 3700 California Street, San Francisco, Calif.	<b>MONROVIA CLINIC</b> Diagnosis and Treatment of Tuberculosis 137 N. Myrtle Street, Monrovia, Calif.	<b>ST. MARY'S HOSPITAL</b> General Hospital 2200 Hayes Street, San Francisco, Calif.
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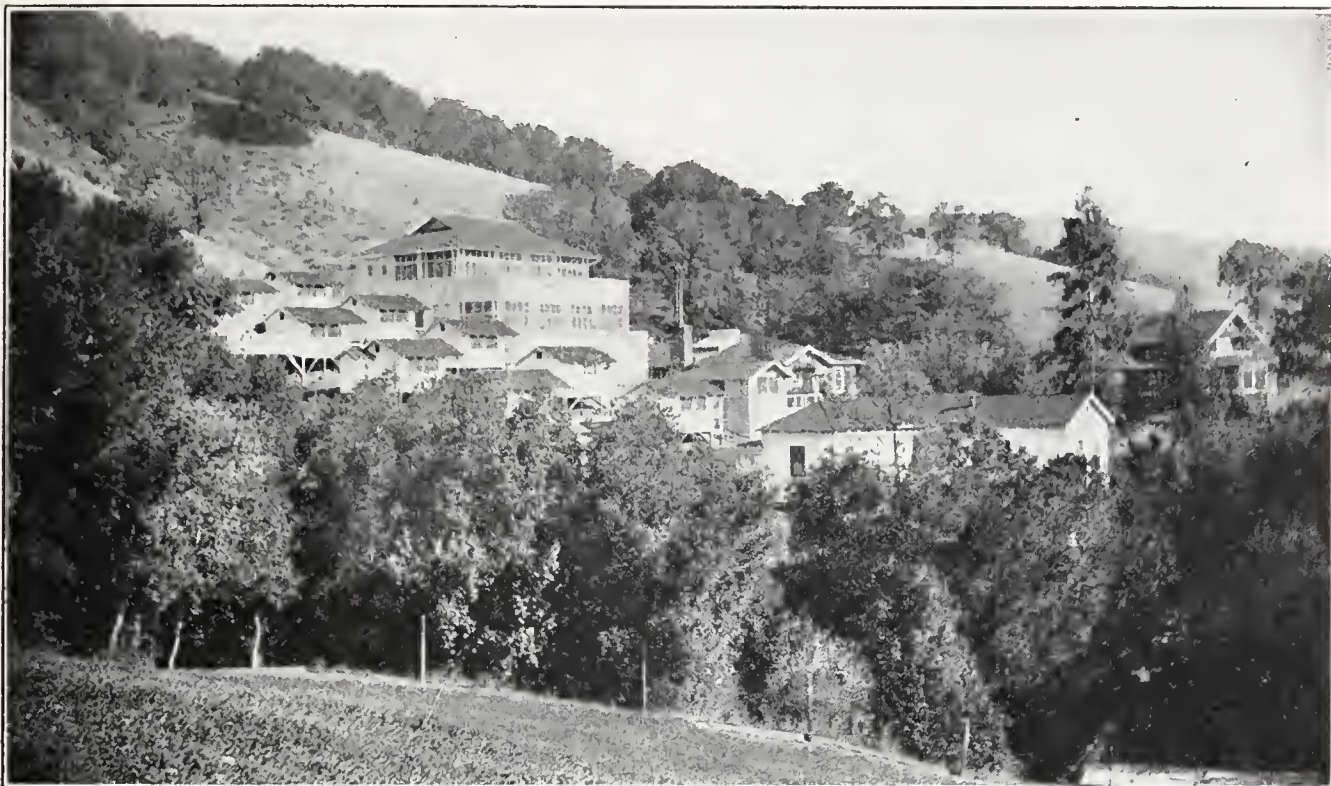
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## BOOK REVIEWS

List of Books Received

### BOOKS RECEIVED

**Uterine Tumors.** By Charles C. Norris, M.D., Professor of Gynecology and Obstetrics and Director of the Department, University of Pennsylvania. Leather. Pp. 251. Illustrated. Price, \$3. New York: Harper Brothers, 1930.

**Cancer of the Breast.** By William Crawford White, M.D., F.A.C.S., Junior Surgeon to the Roosevelt Hospital, Consulting Surgeon to the New York Nursery and Child's Hospital. Leather. Pp. 221, illustrated. Price, \$3. New York: Harper Brothers, 1930.

**Birth, Stillbirth, and Infant Mortality Statistics for the Birth Registration Area of the United States. 1927.** Thirtieth Annual Report. Part I. Summary and rate tables and general tables. Paper. Pp. 253. Washington: The United States Printing Office, 1930.

**Mortality Statistics. 1927.** Part II. United States Department of Commerce. Bureau of the Census. Text and tables. Paper. Pp. 159. Washington: The United States Printing Office, 1930.

**Lectures on Colonic Therapy.** Its Indications, Technic, and Results. By O. Boto Schellberg, New York City. Paper. Pp. 55. New York City: The Oboschell Corporation, 1930.

**Gynecology for Nurses.** By George Gellhorn, M.D., F.A.C.S., Professor of Gynecology and Obstetrics and Director of the Department, St. Louis University of Medicine. 12mo of 275 pages, with 145 illustrations. Cloth. Price, \$2 net. Philadelphia and London: W. B. Saunders Company, 1930.

**Obstetrics for Nurses.** By Joseph B. DeLee, M.D., Professor of Obstetrics and Gynecology, University of Chicago, School of Medicine; Obstetrician to the Chicago Lying-In Hospital and Dispensary. New (ninth) edition, revised. 12mo of 645 pages, with 269 illustrations. Cloth. Price, \$3 net. Philadelphia and London: W. B. Saunders Company, 1930.

**Medical Education and Related Problems in Europe.** By the Commission on Medical Education, April 1930. Paper. Pp. 200.

**Methods and Problems of Medical Education.** Sixteenth series. Paper. Pp. 251. New York: The Rockefeller Foundation, 1930.

**Recent Advances in Neurology.** By W. Russell Brain, M.A., D.M. (Oxon.), M.R.C.P. (London), Assistant Physician to the London Hospital, and E. B. Straus, B.A., B.M., B.Ch. (Oxon.), M.R.C.P. (London Clinical Assistant to the Neurological and Psychiatric Clinic of the University of Marburg. Second edition. Cloth. Pp. 429, with 39 illustrations. Price \$3.50 net. Philadelphia: P. Blakiston's Son & Co., Inc., 1930.

**Merck's Index.** Fourth edition. An Encyclopedia for the Chemist, Pharmacist and Physician, giving the names and synonyms; source, origin, or mode of manufacture; chemical formulas and molecular weights; physical characteristics; melting and boiling points; solubilities; specific gravities; medicinal action; therapeutic uses; ordinary and maximum doses; incompatibilities; antidotes; special cautions; hints on keeping and handling, etc., of the chemicals and drugs used in chemistry, medicine, and the arts. Leather. Pp. 585. Price, \$5, with a discount of 50 per cent to members of and those affiliated with the medical, chemical, pharmaceutical, and allied professions. New York: Merck & Co., Inc., 1930.

### BOOK REVIEWS

**The Blood Picture and Its Clinical Significance (Including Tropical Diseases)—A Guide Book on the Microscopy of Blood.**—By Professor Dr. Victor Schilling. Translated and edited by R. B. H. Gradwohl. Seventh and eighth revised edition. Pp. 408. Illustrated. St. Louis: The C. V. Mosby Company, 1929.

In this book the author has attempted, with some success, to establish a systematic method by means of which the differential leukocyte count of the blood is amplified by further classification of individual cells. The method is especially applicable to neutrophilic leukocytes, but the significance of coincident percentage variations of other leukocytes (monocytes, lymphocytes, eosinophils, etc.), is clearly and convincingly shown. The relationship

(Continued on Next Page)



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**BOOK REVIEWS**

(Continued from Preceding Page)

of the differential count of leukocytes to the total leukocyte count is also defined.

The author's method is, for the most part, squarely based upon essentials already well recognized and generally accepted by medical men, and this circumstance lends considerable strength and plausibility to his premise.

In effect Doctor Schilling has not only preserved the advantages of Arneth's classification, but has simplified and amplified similar principles in such a way as to make them more immediately applicable to clinical practice.

H. A. W.

**Roentgenographic Technique—A Manual for Physicians, Students, and Technicians.** By Darmon Artelle Rhinehart. Pp. 388. Illustrated. Philadelphia: Lea and Febiger, 1930. Price, \$5.50.

Quot homines, tot sententiae—than which is no more adequate expression of the relation between roentgenologists and their technical methods. Between the man who professes to be above the necessity for good films and boasts of his ability to make diagnoses from films the technical quality of which is beneath contempt, to the other who spends as much time and care in the minutiae of his technical procedures as he does on his study of the films after he gets them, there is a broad gap which includes all the practitioners of the fascinating art and science.

This book is the expression of one man's method and, as such books go, it is a good one. The technique it describes is not above criticism, but it would do for a beginner, and if the beginner were human he would have his own methods securely on tap within a year. The author would have done well to have devoted a little more space to the fundamental principles of detail and contrast and methods of getting the most satisfactory diagnostic combinations of the two. The simple rules of the relations between photographic quality and small focal spots, low voltage, high milliamperage, long exposure time and secure immobilization are so fundamental, so easy and so widely neglected that it would seem impossible to overstress them. Any intelligent person who knows and understands them can do good technical work in two weeks. Any technician who does not know and understand them will never be really conversant with the limitations or the potentialities of the art. It is a pity that this book is not a little more specific about such fundamentals.

J. M. R.

**Getting Well and Staying Well—A Book for Tuberculous Patients, Public Health Nurses, and Doctors.** By John Potts. Second edition. Pp. 221. St. Louis: The C. V. Mosby Company, 1930.

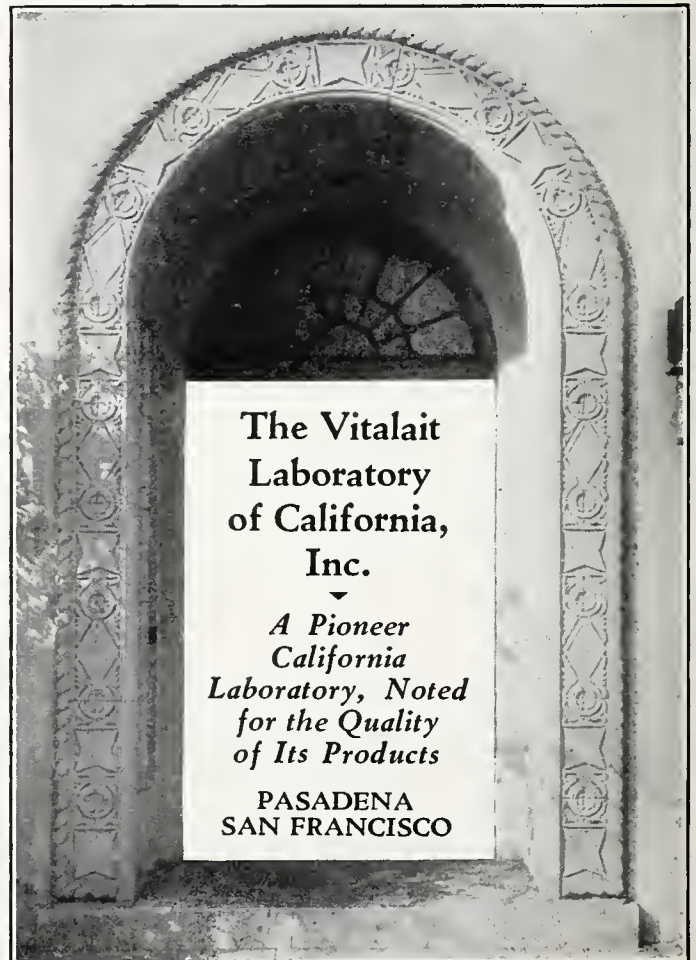
As stated in the subtitle, this is a book for tuberculous patients, public health nurses, and doctors.

It is an infinitely practical book, written primarily for the lay reader, yet contains much information acceptable to the physician faced with the personal problems of a tuberculous patient.

The first chapters deal with suspecting tuberculosis and the importance of early diagnosis. The saying is quoted,

"People don't die because of tuberculosis, but because of ignorance of tuberculosis." Not only doctors, but the public must be educated into recognizing the early stages and accepting the diagnosis while there is yet good hope of recovery. Too many people ignore the possibility in themselves and then refuse a competent diagnosis, because they do not fit into the typical lay picture of tuberculosis, emaciation, night sweats, and hemorrhage.

(Continued on Page 14)





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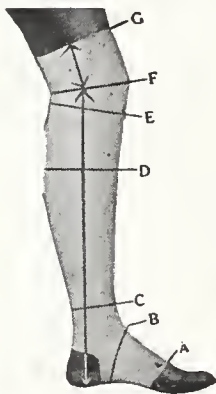
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## BOOK REVIEWS

(Continued from Page 12)

After the diagnosis is made, the importance to the patient of "learning tuberculosis" is stressed. The patient must understand the road which has to be followed, the pitfalls which may be met with and the consequences which will surely follow if he loses patience and strays from the road. There follows a short account of the needed rest, sleep, and diet, which constitute the "rest cure," and the essential points of sanitation, disposal of sputum, bedding and utensils, and the importance of ventilation. The mental aspect of the treatment is not forgotten—"peace, quiet and cheerfulness," and the avoidance of tactless visitors, conflicts with family and friends who doubt the diagnosis and offer advice.

Later chapters deal with the evidences of improvement, the outlook, and the causes of failure, subsequent dangers of physical strain, acute infections and pregnancy, and the importance of finding suitable employment and submitting to check-up examinations.

All through the book the economics of tuberculosis are considered, the advantage of early and thorough treatment, of looking ahead to the expense entailed by prolonged rest, and avoiding waste of money by urging unnecessary change of climate.

H. M. D.

**The Science of Nutrition Simplified—A Popular Introduction to Dietetics.** By D. D. Rosewarne. Pp. 314. Illustrated. St. Louis: The C. V. Mosby Company, 1929. Price, \$3.50.

The author has succeeded very well in outlining the scientific data which has accumulated, covering the science of nutrition in such a manner that the ordinary person may be able to settle questions of diet satisfactorily.

The first part of the book is devoted to a complete statement in simplified terms of the nutritional needs of the organism, and has then gone on to show how those needs are satisfied by the different nutriment.

A chapter preceding the discussion of the necessity of the organism for various foodstuffs, is devoted to preliminary considerations which outlines in general the object of dietetics and the function of foods.

The book is very well written, quite conservative, accurate, and suitable for the lay mind as well as for many physicians whose sorties into the field of dietetics are limited.

It should be stated that the book does not enter into the discussion of the science of nutrition as applied to pathological conditions. It is limited to the normal indi-



vidual except that there is a short chapter on the special diets to be used in childhood, pregnancy, and that type of obesity which results from dietetic errors.

Finally a group of accurate food tables are appended.  
H. C. S.

**Stone and Calculous Disease of the Urinary Organs.** By J. Swift Joly. Pp. 568. Illustrated. St. Louis: The C. V. Mosby Company, 1929. Price, \$16.

From the very first chapter of this exceptional volume, one is fascinated by its readability and impressed with the care that has been taken with its preparation.

For over twenty years no book has appeared devoted exclusively to stone and calculous disease of the urinary organs, and this book fills a long-felt want in this respect.

The author begins his book with a very erudite yet extremely interesting history of stone, from the earliest records, and prepares one by the scholastic handling of this subject for the chapters that follow.

From then on he follows the question in a most thorough and complete manner, beginning with the chapter devoted to the composition and formation of calculi, their characteristics and etiology, wherein is shown the results of studies in the fields of physics, chemistry, and physiological chemistry.

The remainder of the volume deals with the distribution anatomically of stones and their treatment, both medical and surgical. Differential diagnosis is carefully considered and the surgical side is presented in very complete detail, including the complications that might present themselves.

Throughout this volume adequate illustrations are present, closely following the text.

Thirty-four pages are devoted to a very able discussion of calculous anuria with the indications for operative or nonoperative treatment. Each chapter has a rather complete bibliography appended.

This book is to be highly recommended to the general practitioner and to the specialist as being both instructive and tremendously interesting as well.  
S. O.

**Surgical Diseases of the Thyroid Gland.** By E. M. Eberts, with the assistance of R. R. Fitzgerald and Philip G. Silver. Pp. 238. Illustrated. Philadelphia: Lea and Febiger, 1929.

Doctor Eberts has written a small volume on the thyroid gland which should find a ready welcome from the medical profession. It is a contribution which will be appreciated by those having a special interest in thyroid disease because of the excellent bibliographs and the readily available data upon all angles of the thyroid question. To the general practitioner it should be of great value as a guide in thyroid disturbances, and to the student I would be happy to offer it as a thyroid bible.

The chapters on embryology, anatomy, physiology, and pathological physiology cover these subjects in a concise and accurate manner, mentioning the controversial points but not dragging the reader into a maze of discussion on the unsettled phases. In the section on pathology, choice of the term "adenoid goiter" for the pathological entity of Graves' disease, known to most American writers as hyperplasia, is unfortunate because of its similarity to adenoma. However, with the present unsettled state of classification in thyroid disease, no present-day pathological classification is entirely satisfactory. Doctor Eberts' tabulation could be simplified to advantage.

The pathological criteria of malignancy are ably discussed, and the reader's appetite for further study is whetted by reference to the foremost writers on this subject. The author has failed to mention the extreme difficulty often found in differentiating malignancy from certain types of thyroiditis. His reference to parathyroid tumors is of unusual interest.

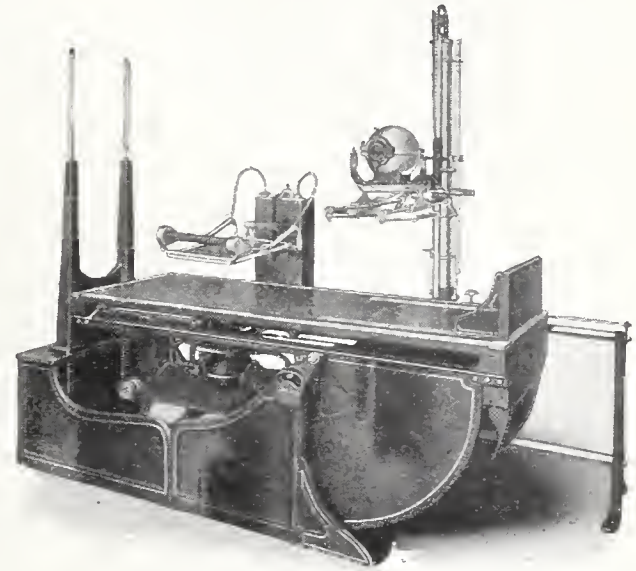
The clinical sections of Doctor Eberts' work, based upon the study of twenty-two hundred cases, are mines of practical information. The author's careful methods of study, and equally careful follow-ups, are reflected through each page of these sections. A simple clinical classification of goiters, with adequate criteria for differential diagnosis, make the work especially valuable. One is given the benefit of the author's large experience in deciding the type of treatment. His plan of preoperative preparation in Graves' disease is worthy of particular attention.

It is surprising that only one unilateral and no bilateral vocal cord palsies have occurred in over one thousand operative cases, and still more surprising that no case of postoperative tetany has been seen. For this reason the author has failed to emphasize the danger of nerve injury in the small gland seen in certain cases of Graves' disease, or the ever-present menace of postoperative tetany in removal of aberrant parathyroid bodies in any type of goiter.

The data contained in the chapter on malignant disease is worthy of publication as a separate monograph, and is a real contribution to the rather scant literature on this subject by American writers. The incidence of malignancy in the series is similar to that of other American clinics, and the prognosis rather better. It is gratifying to note the uniformity with which surgeons of considerable experience in thyroid work recommend early operation upon adenomatous goiters as a cancer preventive. This is a logical conclusion in the Montreal Clinic, where 90 per cent of cancers came from pre-existing adenomata, and three per cent of all adenomatous goiters operated upon proved malignant.

(Continued on Next Page)

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## BOOK REVIEWS

(Continued from Preceding Page)

I feel that Doctor Eberts' book fills a real need in medical literature. It is a guide book to one who would increase his knowledge of thyroid disease. The undergraduate, the internist, the surgeon, and, perhaps especially, he who is a student of this subject, each will find profit in this book, and will find also that pleasure which comes from the perusal of what has been well pondered and what is well expressed.

R. W.

**The Pathology of the Eye.** By Jonas S. Friedenwald. Pp. 253. Illustrated. New York, The Macmillan Company, 1929.

Good textbooks on pathology of the eye have been so hard to find up to the present time that any book on this subject would have been very welcome. But having this want supplied by a book of such excellence as this one by Doctor Friedenwald has caused much rejoicing among those interested in the study of the pathological changes in the human eye.

The book contains over two hundred and fifty very excellent illustrations, which are remarkable for the flawless reproduction of microscopic details. In the text, emphasis has been laid upon the reactions of various parts of the eye to similar diseases and injuries, as well as the similarity between ocular disease and disease in other organs. As the author states, "The aim is rather to form a bridge leading from general pathology to this special field. . . ."

Throughout the work the author has put down original observations, many not previously published. Results of some experimental work is also given for the first time.

A valuable, brief review of ocular anatomy and physiology opens the book.

D. P.

**Hypertension and Nephritis.** By Arthur M. Fishberg. Pp. 566. Illustrated. Philadelphia: Lea and Febiger, 1930.

Doctor Fishberg's book is an excellent résumé of our present knowledge in the field of hypertension and nephritis. In the presentation of this material, the author makes good his claim that the book is "written primarily from the point of view of the actual practice of medicine."

The first ten chapters of the book are devoted to pathological physiology of the kidney. Here the unitary nature of impairment of renal function is advocated, and a welcome simplicity of functional testing of the kidney proposed. This part of the book also stresses the distinction between impairment of renal function and renal insufficiency; and discusses compensation and decompensation in impairment of renal function. In addition, the author's concepts of "hypertensive encephalopathy" and "hypertensive retinitis" do much to simplify our understanding of uremia and other end stages of Bright's disease by removal of certain factors which are still largely regarded as part and parcel of these end stages.

In the clinical part of the book, consisting of fourteen chapters, Doctor Fishberg follows essentially the classification of nephritis proposed by Volhard and Fahr; and his handling of the subject is thoroughly sound and conservative. Especially gratifying is the author's point of view on treatment in which he steers a middle course, basing the degree of dietary restriction on the severity of renal insufficiency. This principle, which is widely recognized in its application to cardiac insufficiency, justly deserves emphasis; also in relation to the functional state of the kidneys.

The last chapter deals with renal and hypertensive disease in pregnancy.

T. L. A.

**Selected Readings in Pathology From Hippocrates to Virchow.** Edited by Esmond R. Long. Pp. 301. Illustrated. Baltimore: Charles C. Thomas, 1929. Price, \$4.

The author, who is a professor of pathology in the University of Chicago, has read over the works of the masters in pathology and has selected from their writings examples of their important communications. He has varied his selections most admirably and has brought together the excogitations of the great minds of almost every country and century.

The time covered reaches from Hippocrates (460 B. C.) to Virchow (1858). The countries of the men touched on are Greece, Rome, Arabia, Italy, France, Holland, England, Ireland, Austria, Germany, and America.

America is represented by three names. These are Horner, with an excerpt from the first pathology written in America; Gerhard, whose example tells of the separation of typhus and typhoid fever; and the illustrious name of Samuel Gross, who wrote the first accepted text on pathologic anatomy.

This volume, read in combination with Long's other book, "The History of Pathology," will lay a proper historical foundation for the student entering pathology.

Every physician can get a thrill from this book. Read Celsus on the signs of inflammation; Galen on diabetes; Rhazes on smallpox; Fracastoro on syphilis; Wepfer on apoplexy; Sylvius on tuberculosis; Lancisi on sudden death and forensic medicine; Astruc on venereal diseases; Laennec on tuberculosis; Bright on nephritis;

(Continued on Page 18)





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### BOOK REVIEWS

(Continued from Page 16)

Louis on statistics on medicine; Hodgkin on Hodgkin's disease; Corrigan on aortic insufficiency; Andral on hematology; Addison on Addison's disease; and Virchow on thrombosis and embolism and his lecture on cellular pathology. If these do not give a feeling of admiration for these minds and feeling of healthy humility, the spirit is not in you.

The book is beautifully printed and bound in the well-known manner of Thomas the publisher. Z. E. B.

**Minor Surgery.** By Frederick Christopher, with a foreword by Allen B. Kanavel. Pp. 634. Illustrated. Philadelphia and London: W. B. Saunders Company, 1929.

In this day of specialization and overemphasis on the problems of major surgery, we have lost sight to a large extent of the everyday minor accidents that befall human beings. It is the successful treatment of these types of

cases that in the eyes of the laity often stamps the doctor as being good or bad.

Doctor Christopher's recent excellent work on minor surgery is a real contribution in helping the profession to successfully treat this type of case. This work is unique in that it not only gives detailed technique in the diagnosis and treatment of every possible problem of minor surgery, but at the same time offers a comprehensive review of the various methods with complete bibliography on almost every page of the text.

The section on treatment of bone injuries and the application of splints and plaster of Paris, is especially to be commended for the minuteness of the detail which is so important in this type of work. The problem of so-called minor infections which so often is the pitfall of the general practitioner is thoroughly and accurately discussed.

It is really difficult to begin to comment on individual chapters of this book, as the more one studies it the more impressive it becomes, so that finally one is led to the conclusion that it is the finest work to date on the subject of minor surgery and can be recommended without hesitation to the medical student, the intern, the general practitioner, and the specialist in surgery.

F. I. H.



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**Tablets Tutocain No. 6.**—Each tablet contains tutocain (New and Nonofficial Remedies, 1929, p. 51), 0.05 gram. Winthrop Chemical Co., Inc., New York.

**Ampoules of Pitocin 0.5 Cubic Centimeter.**—Each ampoule contains more than 0.5 cubic centimeter of pitocin solution. Parke, Davis & Co., Detroit.—*Jour. A. M. A.*, July 13, 1929, p. 117.

**Merthiolate Jelly 1:2000.**—It contains merthiolate (*Jour. A. M. A.*, December 7, 1929, p. 1809), 0.05 per cent, eucalyptol 0.016 per cent, eugenol 0.016 per cent in a water-soluble base. Eli Lilly & Co., Indianapolis.

**Merthiolate Ointment 1:1000.**—It contains merthiolate (*Jour. A. M. A.*, December 7, 1929, p. 1809) 0.1  
(Continued on Page 23)



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## TRUTH ABOUT MEDICINES

(Continued from Page 19)

per cent in a petrolatum base. Eli Lilly & Co., Indianapolis.—*Jour. A. M. A.*, April 19, 1930, p. 1237.

### FOODS

The following products have been accepted as conforming to the rules of the Committee on Foods of the Council on Pharmacy and Chemistry of the American Medical Association:

**Klim Powdered Whole Milk (Merrell-Soule Co.).**—It is whole milk from which all but about 2 per cent or less of the normal water has been removed by means of the spraying process of drying milk. It contains: fat, 28.0 per cent; protein, 26.7 per cent; lactose, 38.0 per cent; ash, 5.8 per cent; water, 1.5 per cent. Klim milk is used for supplementary feeding to be used according to a physician's formula.

**Borden's Natural Flavor Malted Milk (The Borden Company, New York).**—It is a processed mixture of barley malt, wheat flour, and whole milk, reduced to powdered form. The product contains: fat, 9.2 per cent; protein, 15.5 per cent; lactose, 13.5 per cent; maltose, 35.6 per cent; dextrin, 20.2 per cent; ash, 3.8 per cent; moisture, 2.2 per cent. It is easily digested.

**Mellin's Food (Mellin's Food Company, Boston).**—It is a milk modifier. It contains: fat, 0.16; protein, 10.35; maltose, 58.88; dextrans, 20.69; soluble carbohydrates, 79.57; salts, 4.30; water, 5.62. Mellin's Food is a soluble, easily digestible dry extract made from wheat flour, wheat bran, malted barley, and potassium bicarbonate.

**Mellin's Food Biscuits (Mellin's Food Company, Boston).**—They contain a large percentage of Mellin's Food.—*Jour. A. M. A.*, April 12, 1930, p. 1145.

(Continued on Page 26)

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## KNOX *is the* *real* GELATINE

Contains No Sugar

### JELLIED VEGETABLE SALAD (Six Servings)

	Grams	Prot.	Fat	Carb.	Cal.
1 tablespoon Knox Sparkling Gelatine	7	6	....	....	....
¼ cup cold water, 1½ cups hot water	....	....	....	....	....
1 teaspoonful whole mixed spices	....	....	....	....	....
½ teaspoon salt, ½ cup vinegar	....	....	....	....	....
½ cup chopped cabbage	50	1	....	3	....
½ cup chopped celery	60	1	....	2	....
½ cup canned green peas	40	1	....	4	....
¼ cup cooked beets, cubed	40	1	....	3	....
Total	10	....	12	88	
One serving	2	....	2	15	

Soak gelatine in cold water for five minutes. Bring to boil water, salt and spices. Pour on gelatine to dissolve it and add vinegar. When jelly is nearly set, stir in the vegetables, pour into mold and chill until firm. Unmold on lettuce and serve with salad dressing. Garnish with sprig of parsley or strip of pimento.

### JELLIED CHICKEN IN CREAM (Six Servings)

	Grams	Prot.	Fat	Carb.	Cal.
1 tablespoonful Knox Gelatine	7	6	....	....	....
¼ cup cold chicken broth or water	....	....	....	....	....
1¼ cups boiling chicken broth, fat free	....	....	....	....	....
½ teaspoon salt	....	....	....	....	....
Pinch pepper	....	....	....	....	....
1 cup cooked chicken, cubed	125	24	20	....	....
¼ cup cream, whipped	55	1	22	1.5	....
Total	31	44	1.5	526	
One serving	5	7	....	88	

Soak gelatine in cold liquid for five minutes and dissolve in hot broth. Season with salt and pepper and chill until nearly set. Fold in chicken and whipped cream. Turn into molds and chill until firm. Serve on lettuce or garnish with parsley and strip of pimento.

**If** you agree that recipes like the ones on this page will be helpful in your diabetic practice, write for our complete Diabetic Recipe Book—it contains dozens of valuable recommendations. We shall be glad to mail you as many copies as you desire. Knox Gelatine Laboratories 417 Knox Ave., Johnstown, N. Y.

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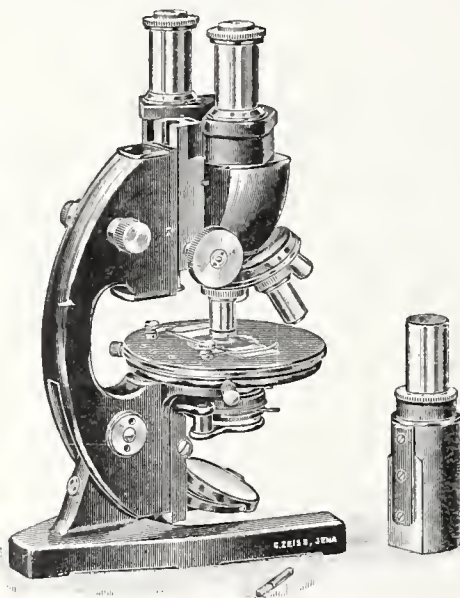
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### TRUTH ABOUT MEDICINES

(Continued from Page 23)

**Instant Postum (Vacuum Cereal Beverage) (Postum Co., Inc., Battle Creek, Michigan).**—A beverage made only of whole wheat and bran roasted with a small portion of sugar-cane molasses. It contains no caffeine.

**Postum Cereal (Postum Co., Inc., Battle Creek, Michigan).**—It is made only of whole wheat and bran roasted with a small portion of sugar-cane molasses. It contains no caffeine.

**Sac-a-Rin Brand of Canned Vegetables (Kings County Packing Co., Oakland, California).**—Brands: California Tomatoes; California Asparagus; California Spinach. These are vegetables packed without added salt or sugar for dietetic purposes. For use when an intake of carbohydrate—particularly sugar—is to be restricted.

**Borden's Sweet Chocolate Flavor Malted Milk (The Borden Co., New York).**—It has the following average composition: fat, 6.7 per cent; protein, 9.7 per cent; sucrose, 47.8 per cent; other carbohydrates (maltose, dextrin, lactose), 31.0 per cent; ash, 2.4 per cent; insoluble chocolate solids, 0.4 per cent; moisture, 2.0 per cent. This product differs from other chocolate malted milks in that the cocoa is cooked.

**Quaker Puffed Wheat (The Quaker Oats Co., Chicago).**—It is made from whole wheat; 25 per cent is bran. The minerals are retained. Puffed wheat with whole milk is approximate in energy value to a dish of hot cooked cereal.

**Sanka Coffee (Sanka Coffee Corporation, Brooklyn and Los Angeles).**—A blend of South American coffee with Mocha and Java. The caffeine is removed by a process which removes 97 per cent or more of the caffeine originally present in the bean (based on 1.1 per cent caffeine in coffee bean).  
(Continued on Page 28)



**FEMALE DEATH RATE  
FROM DIABETES IN U.S.A.  
50% HIGHER THAN IN  
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So comes the warning from the Metropolitan Life Insurance Co. statisticians, who add "Both countries recorded new maximum death rates last year".

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Laboratory tests to establish the relative efficiency of creosote, guaiacol, and other creosote constituents are now under way at the Philadelphia College of Pharmacy and Science.

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## TRUTH ABOUT MEDICINES

(Continued from Page 26)

cent of caffeine). It may be used when other coffee has been forbidden.

**Milk-Packed Coconut (Franklin Baker) (Franklin Baker Co., Hoboken, New Jersey).**—The shredded coconut is packed in cans without the addition of sugar, the can being filled with coconut milk.

**Franklin Baker Premium Coconut (Franklin Baker Co., Hoboken, New Jersey).**—The shredded coconut is mixed with added sugar and 5 per cent glycerin and passed through driers.

**Southern Style Coconut (Franklin Baker) (Franklin Baker Co., Hoboken, New Jersey).**—Coconut meat is passed through an automatic shredding machine, after which the added sugar is mixed with the coconut meat, the resultant product being passed through driers. The product is packed in cans in an atmosphere of carbon dioxide.

**Hellman's Mayonnaise (Richard Hellman, Inc., Long Island City, New York).**—It is made from a blend of edible vegetable oils, vinegar, egg yolk, spices, and condiments beaten to a stable emulsion.

**Minute Tapioca (Minute Tapioca Co., Inc., Orange, Massachusetts).**—It is made from tapioca flour. The flour is bolted, mixed with water, steam-cooked, granulated and dried.

## PROPAGANDA FOR REFORM

**Citrin Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that Citrin is marketed by the Table Rock Laboratories in the form of capsules claimed to contain "50 milligrams cucurbititrin," the latter being "a nontoxic glucosid-saponin processed from the seed of the watermelon (*Cucurbita citrullus*). In the information submitted to the Council, Citrin is stated to be "the crude extract" obtained from the water-



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melon seed. The available evidence does not indicate that the product is a pure glucoside. Citrin is stated to be "for the treatment of hypotensive cardiovascular disease" and is advertised as "The new therapy for vascular hypertension." The Council reviews the available evidence for the usefulness of Citrin and explains that the question at issue seems to be whether the observed lowering of blood pressure by drugs is of any great clinical value, and when this does occur, to what extent it is due to the drug and to what extent to other factors. Altogether, the Council concludes that the clinical evidence does not establish the therapeutic usefulness of Citrin; hence, the Council declared Citrin unacceptable for New and Nonofficial Remedies.—*Jour. A. M. A.*, April 5, 1930, p. 1067.

Haley's M-O Magnesia-Oil Not Acceptable for New and Nonofficial Remedies and Magnesia-Mineral Oil (25) Haley Omitted From New and Nonofficial Remedies).—The Council on Pharmacy and Chemistry reports that Haley's M-O Magnesia-Oil (exploited with the emphasis on "Haley's M-O") is the name under which the Haley M-O Co., Inc., has marketed a mixture of magnesia magma (milk of magnesia) and liquid petrolatum; that the firm requested acceptance of the product for New and Nonofficial Remedies stating that it is composed of magma magnesia 75 per cent by volume and liquid petrolatum 25 per cent by volume; that the Council refused admission of the product to New and Nonofficial Remedies because the use of a mixture of liquid petrolatum and magnesia magma in fixed proportions under an uninforming name is detrimental to rational prescribing; and that the preparation was accepted after the firm had adopted the name Magnesia-Mineral Oil (25) Haley and had revised its advertising to make it acceptable. After the Council had repeatedly been obliged to object to the advertising, the firm wrote to the Council that its attempt to meet the require-

(Continued on Next Page)

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## TRUTH ABOUT MEDICINES

(Continued from Preceding Page)


ments of the Council were proving financially unprofitable and that it had decided to go back to the old name "Haley's M-O." This means that physicians will again be asked to use this simple pharmaceutical mixture under an uninforming name. The Council directed the omission of Magnesia-Mineral Oil (25) Haley from New and Nonofficial Remedies and declared Haley's M-O Magnesia-Oil ("Haley's M-O") unacceptable for New and Nonofficial Remedies.—*Jour. A. M. A.*, April 5, 1930, p. 1067.

**Sun Cholera Mixture.**—During the cholera excitement in New York in June 1849, a physician by the name of G. W. Busted sent a recipe for the disease to the editor of the *New York Sun*. It was printed, and was so successful in the relief, at least, of the symptoms that it came to be popularly known as the Sun Cholera Mixture. It was admitted to the first edition of the National Formulary in 1883 and in subsequent editions under that name. The original formula called for: tincture of opium, tincture of rhubarb, tincture of capsicum, spirit of camphor, essence of peppermint, equal parts. The formula was modified somewhat later, on account of the changing strength of some of the ingredients, in later editions of the pharmacopeia.—*Jour. A. M. A.*, April 5, 1930, p. 1088.

**Corozone.**—The Corozone unit is a small portable ozonator which can be operated on the ordinary electric light circuit. Ozone in sufficient concentration to kill bacteria is not suitable for ordinary respiration because of its irritant action. Ozone cannot be used as a substitute for good ventilation in a room any more than deodorants or perfumes can be used as a substitute for bathing the body. There has been no sound scientific work brought forward to show that there is any place whatever for ozone in prob-

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lems of ventilation.—*Jour. A. M. A.*, April 5, 1930, p. 1089.

**Syrup of Alfemine, et al.**—Sherman L. Davis, Ph.D., is professor of chemistry and director of nutritional research in the Indiana University School of Dentistry. He is neither a physician nor a dentist. During the past few years Professor Davis has been doing a good deal of lecturing before dental societies. In his talks Professor Davis recommends certain proprietary medicinal products, four in number: "Syrup of Alfemine," "Vicodol," "Caperoid Tablets," and "Vicerol Capsules." All of these products used to be manufactured by the Ucoline Products Company of Indianapolis. The manufacture and distribution of these products has been taken over by the Rochester Laboratories, Inc., Rochester, Minn. It appears that the Rochester Laboratories distribute the preparations on a royalty basis; the royalties being turned over to the trustees of Indiana University. Professor Davis does not receive any part of the royalty. Undoubtedly, the newly formed Council on Dental Therapeutics created by the American Dental Association will, in due time, investigate and report on the formulas of Professor Davis that are sold under proprietary names. Meanwhile, the entire arrangement constitutes an unusual scheme in its relationship to the practice of either scientific medicine or dentistry.—*Jour. A. M. A.*, April 12, 1930, p. 1163.

**Action of Phenolphthalein.**—One should always think of the possibility of a phenolphthalein eruption when studying the etiology of a puzzling exanthem. As phenolphthalein is chiefly excreted into the intestine by means of the bile, and reabsorbed from the colon, there is a tendency for its action to continue for several days. Hence, its continued daily use may lead to ultimate overaction with diarrhea, abdominal pains, tenesmus, and bleeding.—*Jour. A. M. A.*, April 12, 1930, p. 1165.

(Continued on Page 34)



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# CALIFORNIA AND WESTERN MEDICINE

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No. 6

## THE VALUE OF RADIOTHERAPY IN MEDIASTINAL TUMORS\*

By ARTHUR U. DESJARDINS, M. D.  
*Rochester, Minnesota*

MEDIASTINAL tumors often constitute a difficult problem in diagnosis as well as in treatment. Such neoplasms may assume considerable dimensions before the patient is aware that his health is deteriorating or even before any symptoms make their appearance. Pain is the symptom which causes most patients to consult a physician, but many tumors originate in the mediastinal structures and do not cause pain until they have attained sufficient size to interfere with respiration, circulation, or deglutition, and even then many mediastinal growths are essentially painless. Therefore, the early recognition of such neoplasms, so significant in treatment, is not so simple as it may appear. Moreover, the importance for the physician to know the character of such tumors is as great as his ability to obtain such knowledge may be difficult. The clinical manifestations may lead the physician to suspect a tumor, but the physical signs may give an inadequate notion of its size and situation. Roentgenologic examination of the intrathoracic structures may usefully supplement the physical manifestations or give indispensable information about the size and situation of the tumor, and may even give a strong clue to its character, but only too often such information is inadequate or cannot be trusted implicitly. That is, although the roentgenologic examination may clearly and accurately show the outlines of the tumor it cannot be relied on to furnish conclusive evidence of the pathologic character of the growth. When such neoplasms have metastasized to accessible groups of lymph nodes, biopsy may solve the diagnostic problem, but when such metastasis has not occurred this valuable, although not infallible, source of information cannot be utilized.

### DIAGNOSTIC VALUE OF RAY THERAPY

It is generally assumed that the value of radiotherapy, as the term implies, is limited to the treatment of malignant and other lesions, but, as will be shown presently, this is not the case. Besides its strictly therapeutic value, the effect of roentgen or radium irradiation on mediastinal as

well as other neoplasms may furnish invaluable diagnostic indications, and such indications may often be as conclusive as the microscopic inspection of tissue excised from the tumor. To those who are unfamiliar with the action of roentgen and radium rays on normal and pathologic tissues this statement may appear revolutionary until attention is drawn to one or two important considerations. Usually the pathologist must base his opinion of the character of a tumor on the microscopic appearance of one or several small sections of tissue from one or more parts of the growth. Yet, as is well known, different parts of many neoplasms vary much in architecture and cellular morphology. When a tumor is irradiated, on the other hand, the entire neoplasm is exposed to the influence of the rays, and relatively homogeneous tumors made up largely of one kind of cell retrogress at a specific rate and in a specific manner according to the degree of sensitiveness of the cells. Moreover, the rate and manner of regression of a tumor agree closely with the known radiosensitiveness of its normal cellular prototypes. Different tumors of the same kind often exhibit variations in reaction, but only occasionally is the range of such variation sufficient to cause confusion.

### LAW OF SPECIFIC RADIOSENSITIVENESS OF CELLS

Perhaps no law in radiology or in general medicine is more firmly established than the law of the specific radiosensitiveness of cells. Numerous experiments on animals and abundant clinical evidence have proved beyond doubt that every variety of cell in the body and every organ or structure composed largely of one variety of cell has a specific sensitiveness to roentgen or radium rays. The investigations of Heineke, Thies, Warthin, Krause and Ziegler, Rudberg, Aubertin and Bordet, Arella, Regaud and Crémieu, Pappenheim and Plesch, Lazarus-Barlow, and many others have conclusively shown that the lymphocytes in the spleen, lymph nodes, intestinal lymph follicles, bone marrow, circulating blood, and thymus gland are the most sensitive cells in the body. Large numbers of such cells are destroyed within a few days even after moderate irradiation, and such destruction begins within half an hour after exposure to the rays. The rays appear to act first on the nucleus which begins to disintegrate and break up into fragments, and the chromatin débris from the destroyed cells is taken up by some of the reticular cells, which thus assume a phagocytic property and appear to digest the fragmented nuclear chromatin of the destroyed

\* From the Section on Therapeutic Radiology, The Mayo Clinic, Rochester, Minnesota.

\* Read before the General Session of the California Medical Association at the fifty-ninth annual session, Del Monte, April 28 to May 1, 1930.

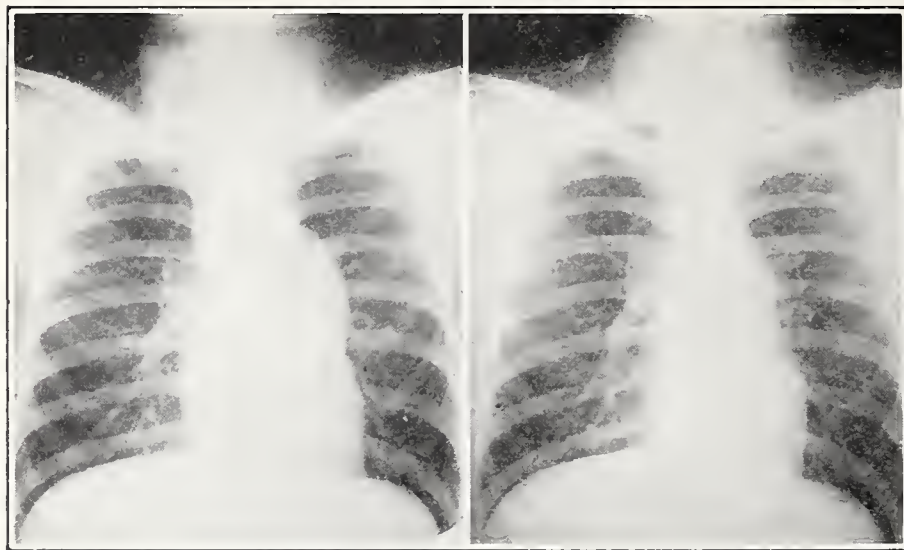


Fig. 1.—Roentgenogram made February 3, 1930, showing a large tumor, apparently originating in the mediastinal lymph nodes.

Fig. 2.—Roentgenogram of the patient, shown in Figure 1, made three weeks after a course of roentgen irradiation and showing marked regression of the mediastinal lymphadenopathic tumor.

lymphocytes. Some of the cells are injured and mitotic division is inhibited without actual disintegration; such cells may regenerate after a time. The degree of lymphocytic destruction and the rate at which the other injured cells regenerate subsequently have been shown to vary according to the dose of rays to which the affected structures have been exposed.

Next in sensitiveness to irradiation are the basal epithelial cells of the salivary glands, the spermatogonial epithelium of the testis and the follicular epithelium of the ovary, the lining epithelium of the upper part of the small intestine, the basal epithelium of the skin and mucous membranes, the peritoneum, and the pleura and lungs. Among the less sensitive structures are the kidneys, liver, and heart, and the least sensitive tissues are those which make up bone and the nervous system. Knowledge of the specific radiosensitiveness of different varieties of normal cells often enables the expert radiologist to identify certain tumors by their rate and degree of regression after exposure to the rays, and such knowledge is of the greatest value in relation to mediastinal tumors. As might be expected, the significance of such knowledge is greatest in relation to tumors derived from the more sensitive varieties of cells. Thus neoplasms originating in lymphoid organs or structures and made up largely of lymphocytes can readily be distinguished by their characteristic and exceptional radiosensitiveness. The reaction of such tumors is usually so great, and corresponds so closely to that of normal lymphocytes, that irradiation constitutes a valuable diagnostic procedure, because it permits the identification of such tumors aside from

any difference in their clinical features. Mediastinal tumors derived from epithelial cells, such as epithelioma of the trachea, bronchus, or esophagus, or from connective tissue cells, such as sarcoma (except lymphosarcoma, which is composed chiefly of lymphocytes) are so much more resistant to irradiation that the differentiation of lymphoblastomatous growths from other mediastinal neoplasms seldom presents any difficulty.

#### COMMENTS ON ILLUSTRATIONS

A few examples may best serve to make clear the value of radiotherapy as a diagnostic test. Figure 1 shows a large mediastinal tumor before the patient had received any treatment. The as-

sociation of moderate cervical and axillary lymphadenopathy indicated lymphoblastoma, but in the absence of biopsy such a diagnosis rested only on what might be termed circumstantial evidence. Figure 2 shows the mediastinum of the same patient twenty-seven days later or three weeks after a single course of roentgen-ray treatment which required five days, and only part of which was directed to the mediastinal tumor. Such rapid regression of the growth unmistakably points to a lymphoid neoplasm, the seat of which was in the mediastinal lymph nodes. Epithelioma of the bronchus or esophagus as well as other tumors which not infrequently metastasize to the mediastinal nodes never recedes so much in such a short time. The only exceptions are the embryonal carcinoma and the mixed, or teratoid, tumors of the testis which sometimes invade the mediastinal nodes secondarily and also retrogress rapidly under irradiation, but the difference in



Fig. 3.—Roentgenogram made September 2, 1929, showing a large bilateral mediastinal tumor.

Fig. 4.—Roentgenogram of the patient, shown in Figure 3, made about seven weeks after a course of roentgen irradiation and showing pronounced reduction in size of the mediastinal tumor.



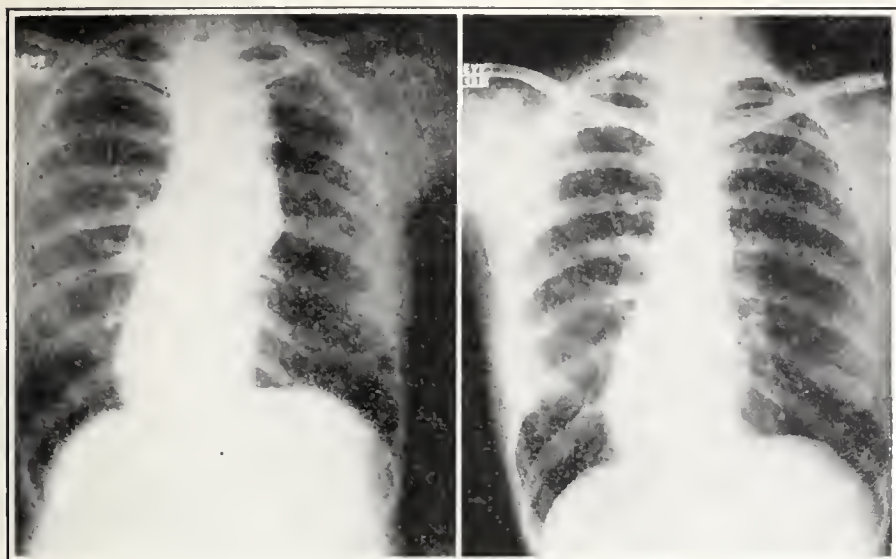


Fig. 8.—Roentgenogram made July 29, 1921, showing mediastinal tumefaction, especially on the right side. This was associated with enlargement of the cervical and axillary lymph nodes.

Fig. 9.—Roentgenogram of the thorax, shown in Figure 10, made March 28, 1922, showing complete disappearance of the mediastinal tumor. A roentgenogram made September 28, 1921, had presented the same appearance.

clinical and physical manifestations is usually such that confusion can rarely occur.

Figure 3 shows another large tumor apparently originating in the mediastinum before treatment. Figure 4 shows the marked regression of the neoplasm which occurred during the next eight weeks or within seven weeks after an initial course of roentgen irradiation requiring six days of treatment. Such rapid reduction in the size of the tumor constitutes an absolute indication of a growth derived from lymphoid tissue and composed largely of lymphocytes. No other kind of tumor, with which this could be confused, could retrogress so rapidly. This rapid rate of regression characterizes tumors originating in lymphoid tissue and corresponds so closely to the radiosensitiveness of normal lymphocytes as to furnish an invaluable means of identifying such

growths. The difference in the rate of regression between lymphoid and epithelial or connective tissue tumors is so great and so distinct as to leave no room for doubt, and this regardless of the grade of malignancy of the epithelioma or sarcoma. The only exception, and such exceptions are decidedly uncommon, is found in those rare cases in which excessive and abnormal cellular hyperplasia in the enlarged lymph nodes is complicated by secondary infection. The inflammatory process in such cases may greatly alter the reaction of the lymphocytes, and the rate of regression under such conditions may be reduced sufficiently to make absolute differentiation difficult.

The exceptional radiosensitiveness of lymphocytes and of mediastinal and other tumors derived from such cells also makes it possible to distinguish growths of this character from lesions such as aneurysm of the aorta. The differential diagnosis of aneurysm may be difficult, and the deduction from roentgenologic appearances alone that the condition is aneurysm may often be unreliable. Exposure of the mediastinum to an adequate but moderate dose of roentgen rays is an almost infallible means of ascertaining whether an abnormal mediastinal shadow is caused by a lymphoid tumor or by an aortic aneurysm. In the case of the former the shadow will rapidly diminish in size, but in the case of the latter the shadow will remain unchanged. In other words, the lymphadenopathy will promptly show the influence of exposure to

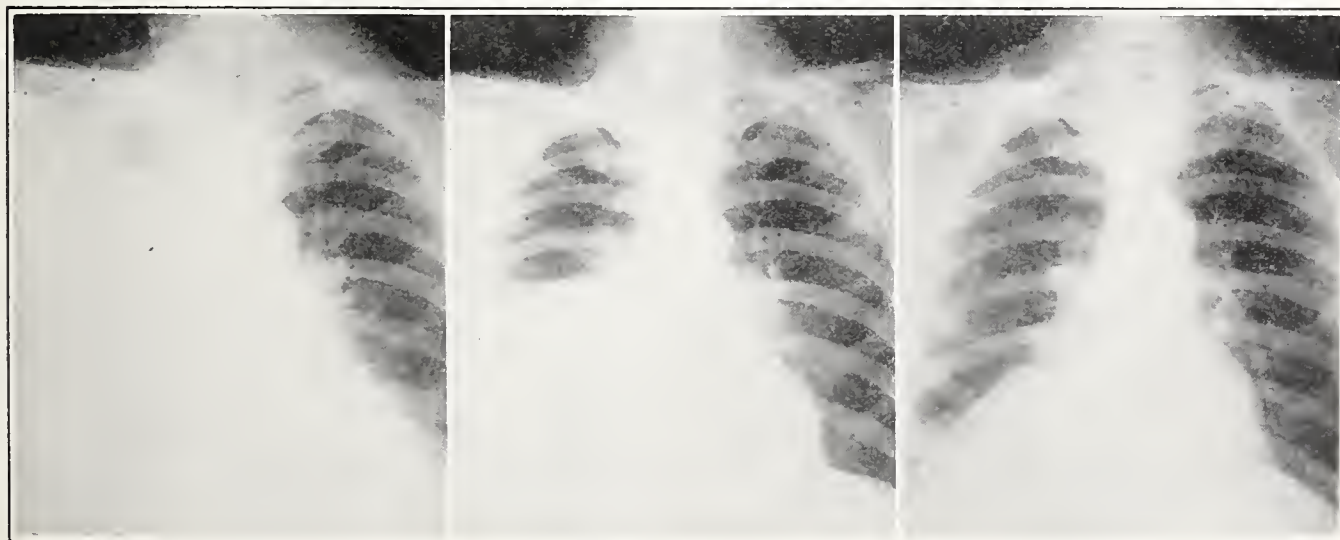


Fig. 5.—Roentgenogram made March 10, 1925, showing practically complete right hydrothorax, indicating circulatory obstruction caused by enlarged mediastinal lymph nodes.

Fig. 6.—Roentgenogram of the thorax, shown in Figure 5, made April 7, 1925, showing beginning absorption of the remaining fluid in the right pleural cavity as the lymphadenopathy receded after removal of 2700 cubic centimeters of clear fluid on March 30, 1925.

Fig. 7.—Roentgenogram of the thorax, shown in Figures 5 and 6, made May 25, 1925, showing complete absorption of the fluid from the right pleural cavity.



the rays, while the aneurysm will not be affected in the least.

Sometimes the diagnostic problem may be to decide between a malignant tumor and a benign, inflammatory process. Again radiotherapy may furnish an important clue. Inflammatory lesions confined to the mediastinum and contiguous structures may differ considerably according to the identity of the infecting organisms, and they may vary much in the degree of leukocytic infiltration. Some degree of infiltration, however, is usually present. It is well known that the majority of leukocytes infiltrating such lesions are lymphocytes, at least at a certain stage, and it may safely be assumed that the infiltrating lymphocytes will be destroyed by irradiation. The effectiveness of radiotherapy for numerous acute and chronic forms of inflammation, such as furuncle, carbuncle, delayed resolution in pneumonia, trachoma, erysipelas, parotitis, tuberculous adenitis and peritonitis, and actinomycosis, rests on such vulnerability of the leukocytes and especially of lymphocytes. Therefore, if a mediastinal lesion reacts at the rate of normal lymphocytes and if the clinical features are distinctly not those of lymphoblastoma, it may confidently be assumed that the lesion represents some variety of inflammation and not a malignant condition. Such reaction probably explains the exceptionally prompt disappearance, under small doses of roentgen rays, of lesions previously assumed to be malignant.

#### THERAPEUTIC VALUE

As may be surmised from the foregoing considerations on the diagnostic possibilities of radiotherapy, the value of roentgen-ray or radium treatment for mediastinal tumors is greatest in neoplasms derived from and composed of cells which have a high degree of radiosensitiveness, such as the lymphadenopathic growths which typify Hodgkin's disease, lymphatic leukemia, and lymphosarcoma. Unfortunately, the cause of these diseases, or of these different phases of the same pathologic condition, is not yet known, and the ultimate prognosis is almost always unfavorable. It is true that an occasional case of Hodgkin's disease is discovered and treated early and that a permanent cure sometimes results, but such exceptions are so infrequent as to emphasize the rule. Desjardins and Ford (1923) established the fact that the duration of the disease in the average case, without systematic treatment, is approximately two and a half years. Even though, when the disease is allowed to develop without any attempt at therapeutic control, the outlook for the patient is decidedly unpromising and the physical status deteriorates more or less steadily, adequate treatment may alter the situation greatly and the improvement may be maintained for months or years. Enormous mediastinal tumors of this character interfering with respiration or circulation and causing cough, dyspnea, shortness of breath, engorgement and dilatation of the superficial

veins, and unilateral or bilateral hydrothorax, can often be made to disappear and the general condition to improve in proportion. The rapidity with which even marked symptoms begin to subside after exposure to a suitable dose of radiation is a salient and characteristic feature. The respiratory disturbances and the hydrothorax diminish as the pressure produced by the enlarged mediastinal nodes is relieved. The anemia and pruritus, which so often accompany Hodgkin's disease and lymphosarcoma, promptly subside or disappear in many cases. The effectiveness of the treatment, however, depends to a considerable degree on the extent, degree of chronicity, and stage of the disease. As the lymphoblastomatous process becomes general, it tends to reach what may be designated as a critical point. Sufficient experience with the disease enables one to recognize that the patient has reached or is approaching this stage. The importance of such recognition cannot be overemphasized because, instead of improving the condition of the patient, excessive or too concentrated treatment at or near the critical point may shorten rather than lengthen life. This phase of the disease is related more to the course than to the extent of the condition. In some patients the disease may be extensive, the symptoms pronounced and the patient apparently not far from death, and yet recovery may be possible.

#### ILLUSTRATIVE CASES

CASE 1.—A man, age forty-nine years, registered at the clinic February 18, 1925. He had been bedridden, suffered from extreme dyspnea, and appeared nearly moribund. To his own knowledge he had been a victim of Hodgkin's disease for several years. From time to time, when his general condition had begun to depreciate, he had gone to a local radiologist and received roentgen-ray treatment, after which his condition had improved for a time. In 1924 he had been well enough to play through a strenuous series of tennis championship matches. Only two months before he had regarded himself as fairly well, and yet when he arrived at the clinic he was extremely ill.

The cervical, axillary, inguinal, and even the retroperitoneal lymph nodes were enormously enlarged. A roentgenologic examination of the thorax showed a practically complete right hydrothorax (Fig. 5), indicating associated mediastinal lymphadenopathy and undoubtedly accounting for the dyspnea. The patient's condition was so low, indeed, that the advisability of roentgen-ray treatment was questioned.

However, it was felt that withdrawal of the fluid by thoracentesis might relieve the dyspnea sufficiently to make treatment possible. Accordingly, 2700 cubic centimeters of clear fluid were removed March 11, 1925, and the respiratory difficulty diminished materially (Fig. 6). Roentgen-ray treatment was then inaugurated by short daily sessions to avoid overtaxing the patient's strength. After seven days of treatment another thoracic roentgenogram (Fig. 7) showed that the remaining fluid was being slowly absorbed as the mediastinal adenopathy regressed. General roentgen irradiation was continued field by field until, twenty days later, the fluid remaining in the right pleural cavity had almost disappeared (Fig. 8). One month afterward the fluid had been absorbed completely (Fig. 9). By this time the general lymphadenopathy had decreased greatly and the patient had recovered to such an extent that he could walk about town freely. He left the clinic to spend some time in



Europe. He failed to follow instructions about subsequent treatment and died the following winter.

If the disease is discovered early, it can be brought under control and kept so for a much longer time, and life may be prolonged several years. But even though in many cases the fatal issue cannot be postponed indefinitely, the symptoms can be relieved more or less completely during the interval. Sometimes, indeed, the clinical disturbances may be abolished so completely that the patient may be able to resume part or all of his usual activities and carry on until shortly before death. Inasmuch as the duration of the disease tends to be shorter in children and young adults and longer in persons of middle and old age, age is one of the factors which govern the effect of treatment, as far as the duration of such effect is concerned. This general rule, however, is subject to many exceptions; it is a tendency rather than a rule. But the more chronic the disease the longer the effect of irradiation on its manifestations tends to last.

**CASE 2.**—A woman, age twenty-seven years, registered at the clinic July 28, 1921, complaining of enlarged lymph nodes on the right side of the neck. Her illness had begun early in 1920 when, shortly after extraction of an upper molar tooth, she had noticed a lump on the right side of the neck. Before 1918, however, she had had repeated attacks of tonsillitis and the tonsils had been removed in 1917 for this reason. Early in 1921 an acute respiratory infection, with cough and expectoration, lasted one month and was accompanied by further enlargement of the right cervical lymph nodes, and this was accompanied by general pruritus.

Examination disclosed slightly enlarged lymph nodes on both sides of the neck, but chiefly in the right supraclavicular space. Percussion of the thorax gave an abnormally broad area of mediastinal dullness, and a roentgenographic examination, July 29, 1921, showed a mediastinal tumor chiefly on the right side (Fig. 10). At biopsy a node from the right supraclavicular space yielded the pathologic diagnosis of Hodgkin's disease. The patient then received a course of rather general roentgen irradiation and a second roentgenographic examination of the thorax, September 28, 1921, showed that the mediastinal lymphadenopathic tumor had almost completely disappeared (Fig. 11). Nevertheless the patient was given a second course of treatment between September 28 and 30, 1921.

The patient remained free from any symptoms related to the lymphoblastomatous process until early in 1927, when the cervical nodes again enlarged, the face became puffy and congested, the respiration became difficult, and general itching caused distress and interfered with sleep. General examination disclosed bilateral supraclavicular, axillary, inguinal, mediastinal, and possibly also retroperitoneal lymphadenopathy, and a multitude of scratch marks corroborated the patient's complaint of pruritus. Roentgenographic examination of the thorax showed fresh tumefaction in the mediastinum, with secondary bronchiectasis of the lower lobe of the right lung. A course of roentgen-ray treatment, given between June 7 and 10, 1927, was followed by rapid improvement, and the patient has remained free from symptoms since that time. This may be regarded as an example of a rather chronic form of Hodgkin's disease and probably accounts for the more lasting influence of irradiation. The patient will undoubtedly die of the disease sooner or later; in the meantime she is well and able to carry on all her usual activities.

Another essentially lymphoid tumor in the mediastinum occurs chiefly in children. I refer to lymphoid hyperplasia of the thymus gland. It has never yet been determined what constitutes a normal thymus gland, as far as size is concerned, and the relationship of what may appear to be an abnormally large gland to the symptoms presented by the patient has not been clearly elucidated. It is undeniable, however, that irradiation causes the size of the hyperplastic gland to diminish rapidly, and the rate of regression again corresponds to the rate of destruction characteristic of normal lymphocytes. This tends to support the view of Hammar and others that the small round cells of the thymus gland are lymphocytes. Such knowledge can be utilized advantageously not only to treat a patient with thymic hyperplasia, but actually to distinguish such hyperplasia from other conditions which may simulate it.

Like epithelial tumors in general, the radiosensitiveness of epithelioma of the bronchus and esophagus is much lower than that of lymphoid tumors, because the sensitiveness of normal epithelium is much less than that of lymphocytes. It is but natural, therefore, that bronchial or esophageal neoplasms derived from epithelium should react less rapidly and less favorably than lymphoid growths. This is precisely what occurs in practice. In fact, there is a considerable gap in radiosensitiveness between the least sensitive of lymphoblastomas and the most sensitive epitheliomas. A small proportion of patients with tumors of this kind derive benefit to the extent of temporary inhibition of tumor growth and improvement in general condition for a number of months, but the improvement in the majority of patients is slight and lasts only a short time. In many patients the beneficial influence of the treatment is hardly perceptible. This applies to patients treated with roentgen rays of short wavelength generated at high voltage as well as to patients treated with radium. One possibility has not been adequately tested. On theoretic grounds it would appear that combined treatment with converging beams of highly filtered roentgen rays of short wave length and the more penetrating gamma rays of radium might lead to improved results in tumors of this kind. This possibility deserves a thorough trial. Sarcomas (except lymphosarcoma) do not often arise in the mediastinal structures, and such as occur in this region are usually metastatic. The radiosensitiveness of such growths depends on the variety of cell of which the tumor is composed. Academically speaking, the most sensitive variety of such neoplasms is represented by the chondrosarcoma, and the least sensitive by the myxosarcoma, but in practice the difference in radiosensitiveness between the two extremes is not great, and associated metastasis to the lungs often prevents the radiologist from accomplishing much.

The Mayo Clinic.



## CLAM AND MUSSEL POISONING\*

By GEORGE E. EBRIGHT, M. D.  
San Francisco

DISCUSSION by H. Sommer, Ph. D., San Francisco; K. F. Meyer, Ph. D., San Francisco; J. H. Kuser, M. D., San Rafael.

INTEREST in poisoning from eating mussels in California was sharply aroused by the occurrence of one hundred and two cases and six deaths in the summer of 1927. In 1928 no human cases occurred, although in July mussels found south of Mussel Rock were highly toxic. In 1929 there have been to date of this writing fifty-five cases of mussel poisoning with one death; and six cases of poisoning from clams with three deaths.

An admirable paper by Meyer, Sommer, and Schoenholz, published September 1928 in the *Journal of Preventive Medicine*, presents a review of the history of mussel poisoning, including the California epidemic of 1927. These authors found that since 1793 approximately two hundred and forty-four people have been poisoned by mussels, and that thirty-eight (15.6 per cent) have died. Of the twenty-one observations five occurred in England and five in California, three in Ireland, two in Prussia and two on the northern Pacific Coast and one each in Scotland, Wales, Norway, and France. The highest mortality (37 per cent) occurred at Timber Cove, California in 1903, and the lowest (5.8 per cent) in the 1927 outbreak. The earliest known cases on the Pacific Coast occurred in 1793 in an English expedition at what is now Vancouver. This affected a number of people and caused one death. Poisoning from mussels was known to the Indians of the Pacific Coast, some of them having been accustomed to place sentries to watch for luminescence of the waves which was associated in their minds with shellfish poisoning. At such time, shellfish were forbidden to be eaten for two days; those eating shellfish caught at such a time were thought to be subject to sickness and death.

## FIRST OFFICIAL RECORD IN CALIFORNIA

In 1915 there were four cases of mussel poisoning in Santa Cruz, with no deaths. Mussel poisoning entered the official archives of California with the report of the deaths of two persons in Santa Cruz in 1917. The State Board of Health report is as follows:

On July 16, 1917, two persons, Mr. C. and daughter, age five, died at Santa Cruz after having eaten heartily of the California black mussel, *Mytilus californianus*.

The circumstances were as follows: Two families, C. and M., respectively, from Stockton, California, were spending their vacation at Santa Cruz. The first family consisted of the parents, a son of seventeen, a daughter of five, and a niece; the second, of the parents, and a son of about seventeen. At the low tide on the morning of July 16 these parties gathered a quantity of mussels from a rock near Santa Cruz, where mussels are in the breakers and range upward toward high tide level. The mussels were cooked and eaten at about 11 o'clock in the morning and were, therefore, perfectly fresh. Mr. C. ate very heartily,

consuming three or four dozen, it is said. Mr. M. and his wife noticed a peculiar "metallic" taste to the mussels and ate sparingly. Two hours after the meal the first symptoms appeared. Numbness at the tip of the tongue, and numbness and tingling of the finger ends, then lack of coordination appeared, the patients reaching for objects which they invariably missed. Dizziness, incoherence of speech and paralysis set in. A physician was summoned at 3 o'clock and the daughter, age five, died shortly thereafter. Mr. C. died at about 6:30 o'clock that evening at the hospital. In both cases the respiratory centers were affected before the circulatory centers, the heart continuing to beat some minutes after the cessation of breathing. Mrs. C. showed no symptoms until 3:30 o'clock, then had a sudden but not fatal attack. The two boys had eaten heartily of other foods after their meal of mussels and were slightly affected, as were also Mr. M. and his wife. Other symptoms noted by all who ate of the mussels were constriction of the throat, some distress in the chest, and stiffness of the neck muscles, and a sensation described as "the teeth being set on edge." The following day there was some pain in the back of the head.

It is also reported that a party of five persons had been made ill by mussels a few days prior to these fatal cases.

During the month of July 1927, one hundred and two people were taken ill with mussel poisoning and six died.

## PROPHYLACTIC MEASURES BY THE STATE

At this point it may be of interest to refer briefly to the organization which has been developed by the State of California to combat epidemics of various kinds.

The State Board of Health, under the authority of the law which requires it to examine into the causes of communicable diseases, established executive divisions or bureaus for special activities such as tuberculosis, sanitary engineering, supervision of food and drugs, epidemiology, and vital statistics. It has also found it advantageous in dealing with many problems to take advantage of the availability of the services of experts in the universities who have been willing to accept the title of consultants to the State Board of Health and who render valued counsel and coöperation.

California has ample cause for gratitude for the manner in which members of the faculties of the University of California and Stanford University have served in this capacity. To Professor Charles Gilman Hyde, California is indebted for the vision which created and shaped the policies of the Bureau of Sanitary Engineering. To Professor W. B. Herms, for several years' work on a mosquito survey of the state which laid the foundation of activities which resulted in the elimination of malaria as a cause of death in this state. To Professor Charles A. Kofoed, for coöperation in the control of tropical parasitical diseases; and to the coöperation of Professor Karl F. Meyer, Dr. J. C. Geiger and Professor Ernest A. Dixon on the botulism problem, all working under the auspices of the American Cannery Association, Doctor Meyer and later Doctor Dixon serving also as consultants to the State Board of Health.

It is apparent that in the study and control of the problem of mussel poisoning, by virtue of the fact that the director of the Hooper Foundation

\* Read before the San Francisco County Medical Society, September 3, 1929.



for Medical Research serves as consulting bacteriologist of the State Board of Health, there is a very desirable combination for scientific research and executive action which gives promise of practical results. Not only is a daily survey of the condition of shellfish along the California coast carried on during the summer months in reference to quarantine requirements, but also advantage is being taken of the opportunity to conduct scientific investigations into the heretofore obscure nature of the toxin sometimes present in these shellfish, and the causes of its appearance. The trend of investigations to date seems to indicate the possible advisability of a definite closed season for mussels at least, during the summer months.

#### CLINICAL ASPECTS OF MUSSEL POISONING

Clinical aspects of poisoning by the common mussel, *Mytilus edulis*, are divided into three types.

The first is of the nature of a gastro-enteritis with choleraic symptoms, such as nausea, vomiting, diarrhea, which do not appear until after a lapse of some hours. Death may result, but not as a rule. This type corresponds to similar forms of intoxication caused by meat, cheese, and other foods.

A second type presents essentially nervous symptoms and is the most common form. It begins with a sensation of heat. Itching appears, usually at first on the eyelids, but before long spreads over the face and may involve a large part of the body. A diffuse erythema or general urticaria develops. Angina and dyspnea are at times pronounced. Recovery usually takes place after a few days.

The third type is paralytic and is the most dangerous. Its aspects are similar to those of curare poisoning. All of the California cases reported are easily recognized as being of the paralytic form.

In the 1927 epidemic, poisoning occurred from eating the large mussel, *Mytilus californianus*, gathered on the rocky ocean shore. The smaller variety, *Mytilus edulis*, which is the commercial variety and found in the bays of California was not toxic. This accounted for the fact that all of the poisoning cases were those which occurred from mussels collected by amateurs picnicking upon the ocean shore. It was therefore not found necessary to place a quarantine for any length of time upon the commercial mussel. During the summer of 1929, however, poisonous mussels have been found within San Francisco bay.

The theory that poisonous mussels are only those which are exposed to the air at low tide is not tenable, as the workers of the Hooper Foundation have shown that the most poisonous mussels may be found deep in the water at the lowest tide. No satisfactory explanation has yet been found as to the origin of the poison. That it may be related to a sex poison is suggested by a possible coincidence with the spawning season, similar, in a measure, to the poisonous eggs of the black

widow spider. It has been definitely shown that the poison is in no way connected with sewage contamination, nor water highly impregnated with copper or arsenic salts as was suggested in some of the European cases. Poisonous mussels may give no evidence whatever to any of the senses of being dangerous, as there is nothing peculiar in the odor or appearance. The poison is not destroyed by cooking. It is equally potent in the raw or the cooked mollusk, and in cooking, being very soluble in water, the broth is highly poisonous.

#### GENERAL SYMPTOMS

The symptoms experienced by the patient in all the California cases are extremely uniform and highly characteristic, ranging from a slight tingling and numbness around the mouth and of the fingers and toes to a more intense feeling of numbness of the extremities with complete loss of muscular power and an extreme sensation of weakness followed by death from respiratory failure. There is no loss of consciousness, the mind remaining perfectly clear to the end, no convulsions and, as a rule, no gastro-intestinal symptoms, although in a few cases there was noted slight nausea.

In the 1929 group, Dr. J. H. Kuser of San Rafael attended six patients who recovered. He reports that the symptoms were tingling of the fingers and mouth, no gastro-intestinal symptoms, the tongue was heavy, patient might feel as though walking on rubber. Recovery was complete within ten days. These were mild cases and came under treatment early. Of a number of patients treated by the San Francisco Health Department, the records show that vertigo, motor weakness, peripheral pain and paresthesia were noted. Doctor Thurlow of Santa Rosa attended two fatal cases of clam poisoning. Each of two brothers, aged forty-two and forty-six years, ate one long-necked clam. These clams were eaten raw. Within one hour symptoms appeared which felt like alcoholic intoxication—light-headedness, numbness of limbs, and slight nausea. These men drove twenty miles and had great difficulty keeping the automobile on the road. On alighting they showed a high stepping, staggering gait, very little pain, a sense of constriction of the throat and inability to swallow and an intense sense of smothering, with mentality perfectly clear throughout and no convulsions. Death occurred from respiratory failure, one brother dying one and a half hours after eating the clam, and the other two and a half hours after eating.

#### DIAGNOSIS

In mussel or clam poisoning the history of eating the mollusk, the rapid onset of symptoms as early as five minutes after ingestion, the sensation of tingling and numbness of the fingers and toes which spreads upward along the limbs to the trunk and neck together with a pronounced feeling of weakness and loss of muscular power, the ataxia, a sensation of floating, the absence or very slight gastro-intestinal symptoms, a sense of constriction of the throat, perfectly clear mind,



absence of fever, and death by respiratory failure, and the fact that the poison is not destroyed by cooking and is very quickly fatal to cats and to chickens, serves in differentiating the condition from the following conditions:

*From Botulism.*—Poison of botulism is readily destroyed by cooking, symptoms are slow in onset, twenty to twenty-four hours or longer after ingestion. There is nausea, vomiting, gastric pain, obstinate constipation, visual blurring, dilatation of the pupil, and strabismus. There is a profuse secretion of sticky mucus in the mouth, nose and pharynx which chokes and strangles the patient, but failure of the respiratory center is not present as in mussel poisoning. In fatal cases there is collapse, dyspnea, sometimes coma or wild delirium shortly before death. It causes "limber neck" and death in chickens.

*From Meat Poisoning.*—The meat from animals diseased with *Bacterium enteritidis*, *Bacterium coli*, or *Bacterium paratyphosum* gives rise to an acute gastro-enteritis. This poisoning does not kill chickens or cats.

*From Mushroom Poisoning.*—There are two forms of mushroom poisoning, essentially different from each other.

A. *Poisoning from Amanita phalloides (Poison Cup or Death Angel).*—This form is very poisonous, the mortality rate ranging from 40 to 75 per cent. Symptoms occur after a prodromal stage of from six to fifteen hours, ushered in by extreme abdominal pain, vomiting, and diarrhea. Vomitus and stool contain undigested food, blood, and mucus. There is rarely constipation. Marked dehydration of the patient occurs and rapidly progressing weakness. Jaundice, cyanosis, coldness of the skin, in the course of two or three days. Death in coma in four to eight days. Severe cases in forty-eight hours. Autopsy reveals enlarged pale yellow liver, congestion of spleen and kidneys.

B. *Poisoning from Amanita muscaria (Fly Mushroom).*—The symptoms of poisoning from *Amanita muscaria* are diametrically opposite to the manifestations of poisoning from atropin, which is a physiological antidote. They are characteristic and striking, and readily lead to an early diagnosis.

Almost immediately following ingestion, sometimes in one or two hours, usually in five or six, there is excessive salivation, perspiration and lachrymation, together with violent retching and vomiting, and with a profuse diarrhea and watery stools. The heart is slow and irregular, respirations rapid. There is marked dyspnea and the bronchi are filled with mucus. Mental symptoms come on rapidly, giddiness with confusion of ideas and, rarely, hallucinosis. There is great variation in the intensity of the different symptoms, sometimes the gastro-intestinal disturbance being the most marked, and at other times the mental and nervous predominating. Mild cases may present excessive salivation and perspiration and a vague discomfort and uneasiness of the

stomach and intestines. In very severe cases nervous and mental manifestations appear early, presenting delirium, violent convulsions, and early loss of consciousness or death from respiratory paralysis. In certain cases after preliminary nausea, vomiting and diarrhea, excessive perspiration and salivation, there may follow a deep sleep of several hours, followed by profound prostration and recovery. The pupils are as a rule contracted and do not react to light nor accommodation.<sup>1</sup>

*From Acute Ergot Poisoning.*—May not appear for some hours and usually begins with vomiting. There are burning pains in the abdomen, tingling of the extremities, great thirst, weakness, and diarrhea. Other symptoms supervene which have no bearing here.

*From Vetch Poisoning.*—Rather rare. Seen in Austria and Italy, northern Africa and in India. Sudden and severe pains in the lumbar regions, girdle sensation, motor paralysis of the lower extremities, tremor, and fever.

*From Curare Poisoning.*—The history alone would be of value in differentiating mussel poisoning from curare poisoning inasmuch as the latter paralyzes the motor end plates and the respiratory muscles.

*Poisoning from Conium or Poison Hemlock.*—This type of poisoning is similar to curare but causes a milder depression of the motor end-plates. There is paralysis with slight numbness beginning in the toes, gradually ascending until it involves the trunk with death from respiratory paralysis. Socrates, dying of this poison, described quite accurately the symptoms of mussel poisoning.

#### TREATMENT

The treatment should consist of prompt emptying of the stomach by emesis or the use of a stomach tube and brisk purgation. As respiratory stimulants, aromatic spirits of ammonia and caffeine are indicated. When necessary, artificial respiration should be given, especially in view of the fact that by means of emesis and purgation the poison can be quite rapidly eliminated and artificial respiration may tide over the crisis.

Convalescence is usually complete in from a few days to a week or two.

384 Post Street.

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1. Peterson, Haines, and Webster: Legal Medicine and Toxicology, second edition, pp. 817.

#### DISCUSSION

H. SOMMER, Ph.D. and K. F. MEYER, Ph.D. (Hooper Foundation for Medical Research, San Francisco).—The question of shellfish poisoning of which Doctor Ebright has given a very valuable and timely account is of special interest to the physicians of central California as well as to chemists and biologists. As far as the literature reveals, poisonings by mussels similar in extent to the recent California outbreaks have never been observed; likewise cases of clam poisoning due to a neurotoxin either identical or very similar to the mussel poison are not recorded. This naturally raises the question of the origin of the poison and the cause of its appearance during a few weeks in midsummer, along a rather limited stretch of the Pacific Coast.



Based on laboratory experiments and field observations by the Hooper Foundation extending over more than two years, the following possibilities seem most likely. The mussel poison is a metabolic product which may be elaborated in excessive amounts either during the spawning period or after ingestion of a particular kind of food. In addition to this it is not unlikely that the meteorological and the tidal conditions are of considerable importance as secondary factors. Another view holds that the toxin is preformed in the water, originating possibly from poisonous animals or from decomposition of vegetable matter, and is absorbed and stored in the shellfish. Hypotheses which are based on the assumption of bacterial decomposition, copper salts, pollution of the water, etc., as causative factors, are not supported by actual observations.

A noteworthy feature of the 1929 outbreak is the fact that clams from various localities of the coast were equally as poisonous as the mussels. Of the eight varieties tested in the laboratory, five kinds of clams which are commonly used as food were found highly toxic. One sample of oysters and several abalones proved harmless.

It has again been noticed that the digestive organ ("liver") of the shellfish yields by far the most potent poison. Extraction of mussels' livers with methyl alcohol has given a crude substance which is lethal to mice in doses of 0.1 milligram on intrap. injection. It is evident, therefore, that we are dealing with a very deadly poison, comparable in strength to some of the most poisonous alkaloids.

Although regular observations along the California coast have been made only for three consecutive summer seasons the epidemiological facts and the laboratory findings thus far accumulated fully warrant the establishment of a strict quarantine on all bivalves during the summer months.

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J. H. KUSER, M. D. (6 Cheda Building, San Rafael). Doctor Ebright's most complete and extensive report on clam and mussel poisoning certainly deserves study by the medical profession.

On July 22, 1929, six cases of mussel poisoning were reported to my office. Mussels were gathered under water and had never been exposed to low tide. All who were poisoned recovered after washing of the stomach. It was fortunate that two medical men were present who gave efficient first aid. One patient was taken to the hospital for treatment. After ten days she was allowed to return to her home. She was extremely prostrated and toxic.

This office was informed that on August 5 three deaths occurred after eating Tomales clams. None of these cases came under our personal observation. The State Department of Public Health quarantined promptly all clams and mussels from Sonoma and Marin counties. Specimens of mussels and clams were at stated intervals submitted to the Hooper Research Laboratories. All were found toxic until the middle of October. The last shellfish were submitted on October 31, when they were found not toxic. Quarantine was raised on November 2, 1929.

A peculiar condition was that oysters in the upper portion of Tomales Bay were found nontoxic by the laboratory. These specimens, as well as abalones, were gathered at the same time, on August 16, 1929.

Taking into consideration the extreme toxicity of these shellfish during certain periods of the warm summer months and that no specific therapy for combating the poison has yet been found, and the impossibility of distinguishing poisonous from nonpoisonous mussels or clams, it would seem advisable that the state authorities establish a closed season for clams and mussels in those months during which they have been found poisonous by the Hooper Research Laboratory.

## THE IMMUNOBIOLOGIC REACTION IN TUBERCULOSIS\*

WITH REFERENCE TO INFANCY AND CHILDHOOD

By ROY E. THOMAS, M. D.  
Los Angeles

DISCUSSION by F. M. Pottenger, M. D., Monrovia; Robert A. Peers, M. D., Colfax; Harold K. Faber, M. D., San Francisco.

TWO infants are exposed to tuberculosis. Why does one develop clinical disease while the other does not?

Of two children who have developed clinical tuberculosis and who are living under the same conditions, one dies and the other recovers. Why is this so? The answer to both questions is probably to be found in the study of the subject as indicated by the caption of this paper.

### MAJOR FACTORS TO BE CONSIDERED

*Primary Infection.*—This may occur at any age, but probably takes place very early in infants exposed daily to open cases of tuberculosis, as in cases in which the mother, father, or both are tuberculous. Of one hundred and twenty-four tuberculous infants observed by Bernard<sup>1</sup> the mother had tuberculosis in ninety-five instances, the father in twenty, and both father and mother in twenty.

The route of infection in the great majority of cases is probably through the respiratory tract by inhalation of bacillus-laden dust particles or droplets.

*The Tubercle.*—When tubercle bacilli gain entrance to susceptible tissue for the first time a tubercle results, the formation of which has been so beautifully described by Krause<sup>2</sup> in his article, "The Anatomical Structure of the Tubercle."

If an experimental inoculation of virulent bacilli is made in a convenient site, such as the skin or cornea, nothing is to be seen for nearly a week. Then a pale, firm nodule appears which slowly enlarges. About the third week this nodule becomes irregular in shape, its center becomes yellowish white in color, and induration gives place to a doughy consistence. While these changes are occurring, the zone of tissue immediately surrounding the nodule has assumed a pinkish color. At the same time small secondary nodules may appear on the edges of the primary nodule. The appearance of these secondary signs indicates the termination of what Krause calls the preallergic phase of tuberculosis. Primary tubercle develops without signs of inflammation.

A microscopic study of the primary tubercle shows surrounding each bacillus or group of bacilli a collection of epithelioid cells. These characteristic cells are arranged in roughly concentric layers which become flattened toward the periphery, where interlacing fibrils appear. Often near the center of this spherical collection of cells

\* Read before the Pediatrics Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



are found large multinuclear cells called "giant cells," which probably represent degenerated epithelioid cells. The other cell usually present in the elementary tubercle is the lymphocyte, found in greatest numbers near the periphery and evidently an invader, in contrast to the epithelioid cell which is apparently derived from the multiplication of cells at the site of the inoculation.

It will be evident from this brief description of the formation of the primary tubercle that tuberculosis, previous to the occurrence of the phenomenon we call allergy, is strictly a proliferative process.

*The Allergic Reaction in Tuberculosis.*—Allergy has been defined by Kolmer<sup>3</sup> as a state of altered reactivity of the body cells—usually an exaggerated susceptibility, but it may indicate reduced susceptibility or tolerance.

Zinsser<sup>4</sup> says: "All forms of specific hypersensitiveness are probably based on the same fundamental mechanism, namely, an acquired altered capacity of the cells to react to the particular inciting substance."

In tuberculosis a state of allergy follows the formation of primary tubercle, whether this results from the implantation of living or dead bacilli. An allergic reaction is the response to the implantation in tissue then in the allergic state, of tubercle bacilli, living or dead, or the injection of tuberculin.

This response is characterized by exudation. It is, then, the allergic reaction which causes all tuberculous inflammation, resulting in infiltration, consolidation or effusion, according to the location involved. It follows that all clinical signs and symptoms are dependent upon this phenomenon.

*Endogenous Reinfection.*—This occurs to some degree in all cases of active tuberculosis. Bacilli reach new fields through the lymphatics, through the blood stream and by direct contact. At once the protective allergic reaction begins, not only at the point of reinoculation, but also about every other focus of infection in the body. If these reactions are not too severe and not too frequent they stimulate sufficient proliferation to wall off all foci and thus effect a cure. Allergic reactions may be so severe as to result quickly in death or so mild that no clinical evidence of them is apparent at the time.

*Tuberculoimmunity.*—Immunity in tuberculosis is defined by Krause<sup>5</sup> as that condition of increased specific resistance to implantation and extension of tubercle bacilli which comes into existence with the earliest formation of the anatomical tubercle. If we accept this conception it is evident that immunity begins with the allergic state and that both continue as long as tubercle bacilli continue to be present in the individual. Indeed, the only distinction between allergy and immunity is that the allergic response is an attribute of the local cell while immunity is an acquired characteristic of the body as a whole.

Practically speaking, immunity has to do chiefly with exogenous reinfection. In experimental animals reinoculation results in a well localized and

chronic lesion which seldom causes death. In those cases which do end fatally, the progress of the disease is exceedingly slow.

*Exogenous Reinfection.*—Does adolescent tuberculosis result from endogenous reinfection from a focus occurring in infancy, or is it an exogenous reinfection in an individual whose childhood immunity has become impaired from one cause or another? It is probable that both occur. It is also very likely that a rare case of primary infection occurs in the adult. Lawrason Brown<sup>6</sup> believes that adult pulmonary tuberculosis results from exogenous reinfection between the ages of fifteen and twenty in approximately 30 per cent of cases.

*Production of Immunity as a Therapeutic or Prophylactic Measure.*—Of what practical value is our imperfect knowledge of allergy and immunity in tuberculosis? Attempts to produce a passive tuberculoimmunity have failed because the immune reaction is cellular and not humoral. The active immunization of infants with living bacilli (Calmette's B. C.-G.) is now being tried on rather a large scale in France and elsewhere, but is still in the experimental stage.

#### SUMMARY

Primary infection usually occurs in infants exposed to open cases of tuberculosis in their homes. It occurs chiefly by inhalation. Its first manifestation is the primary tubercle, developed by proliferation of the characteristic epithelioid cell. Following this preallergic phase occurs the allergic state, upon which all inflammatory reaction depends, and tuberculoimmunity which largely determines the clinical course of the disease. I have tried to show that the development of the tubercle is a proliferative process exclusively; that exudation is an allergic reaction which, although at times the direct cause of most alarming symptoms, is in reality a defensive phenomenon.

1136 West Sixth Street.

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3. Kolmer: From an address delivered before the American Association for the Study of Allergy, Minneapolis, Minn., June 11, 1928.
4. Zinsser: Bul. N. Y. Academy of Medicine, March, 1928.
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#### DISCUSSION

F. M. POTTINGER, M. D. (Monrovia).—Dr. Thomas's paper sets out the early immunological reactions in tuberculosis in a very clear manner.

In order to understand tuberculosis as a clinical disease it is necessary to understand what takes place at the time of the primary infection. The primary infection soon sensitizes all body cells to tuberculo-protein, so that when they come in contact with it again they are resistant. This resistance shows itself in many ways, the most evident of which is an inflammatory reaction. This inflammatory reaction is a very important factor in the prevention of the spread of bacilli through the tissues. It has a tendency to hem them in wherever they are deposited and to prevent them from going farther until they are either destroyed or are encapsulated.



As a result of this allergic reaction, bacilli of reinoculation are for the most part held at the point of implantation, and if the numbers are relatively small the infection which takes place usually proves to be abortive. This is probably the greatest defensive factor that we have in chronic tuberculosis during the early period of dissemination.

It is probable that immunity is something different from sensitization of cells and allergy; at the same time it is also probable that sensitization and allergy are states which are a part of, which precede and which lead up to the ultimate establishment of immunity.

Primary infection of the lung is necessarily of exogenous origin. It may be that the bacilli enter through the air passages, or through the gastrointestinal tract. The theory of the former method has the most adherents; but those who adhere to the latter call attention to the fact that if bacilli gain entrance to the body through the alimentary canal and pass through the intestinal wall, they immediately enter the lymph channels, are poured into the thoracic duct, and thence into the subclavian vein going to the heart, and on through the lesser circulation. So the first opportunity for implantation would be in some portion of the lesser circulation. Entering virgin soil, as the bacilli which form the primary inoculation do, they meet no specific tissue resistance; but entering immune soil, as the bacilli of reinoculation do, they meet the resistance produced by cell sensitization, and a tissue response in the form of allergic inflammation. This protection becomes so great after infection has been present for some time that bacilli can enter the tissues from without only with great difficulty, or when the specific protection has been lowered. So after infection has once taken place the endogenous source of inoculation is much more plausible than the exogenous.

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ROBERT A. PEERS, M. D. (Colfax).—Doctor Thomas, in his paper, and Doctor Pottenger, in the discussion, have covered the fundamentals of the cellular reaction to first and to subsequent invasions of tubercle bacilli. Further discussion of the point would lead merely to elaboration of details.

In considering, however, the two questions which Doctor Thomas formulates at the beginning of his paper, one must recognize other factors involved besides those of allergy or immunity. True, there is in all of us a certain amount of natural immunity, a greater or lesser amount of inherited cellular, or humoral immunity, or both, which gives each of us greater or lesser resistance to the invasion, and to the multiplication and extension to other parts of the organism of the tubercle bacillus. This natural immunity or lack of immunity is undoubtedly a factor in the determination of which infected child develops clinical tuberculosis, and also in the determination of which of those with clinical tuberculosis will fail to recover.

Again the question of dosage plays a part in the outcome of the process which follows implantation. A large dose of bacilli received from the careless tuberculous father or mother is, other things being equal, more dangerous to the child than a small dose of bacilli. Many bacilli furnish the exciting cause for many primary tubercles in first infections. Many bacilli, in secondary infections, furnish the medium for many isolated foci of allergic response. Immunity is a relative term. The greater the dosage of bacilli the more probable this immunity will be overcome.

Accident, as Krause has pointed out, also plays a part in the determination of the result of infection. Some tissues are more suited to hold and fix the bacilli than are others. Thus the accident of location of the first tubercle plays quite a part in retention or extension. The same is true in secondary infection whether endogenous or exogenous. The accident of the rupture of a solitary caseating lymph node into a blood vessel or into the thoracic duct with the production of an acute miliary tuberculosis may furnish

the answer to these questions. Or again, the accident of extension to the meninges of the brain and cord of an already allergic child causes symptoms and results due to the allergic response of exudation quite different from those experienced in the more fortunate individual whose allergic response occurs in the lungs.

As Doctor Pottenger states truly, "In order to understand tuberculosis as a clinical disease it is necessary to understand what takes place at the time of the primary infection."

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HAROLD K. FABER, M. D. (Stanford University Medical School, San Francisco).—Discussion of the subject of Doctor Thomas's paper would be incomplete without mention of three common clinical manifestations of immunobiologic reaction to tuberculosis—erythema nodosum, phlyctenular keratoconjunctivitis, and the so-called epituberculous lesion of the lung. All these coincide in a large majority of cases with a period of violent reactivity to tuberculin, and are regarded by good authorities as effects of tuberculin itself. The literature on erythema nodosum in relation to tuberculosis is quite extensive. The work of Ernberg<sup>1</sup> and of Wallgren<sup>2</sup> may be cited. Casparis<sup>3</sup> has recently discussed the relation of phlyctenular lesions to tuberculosis. Eliasberg and Neuland's<sup>4</sup> paper may be consulted for a discussion of the epituberculous infiltrations of the lung. Another paper of Wallgren's<sup>5</sup> discusses the clinical manifestations of tuberculin allergy in infants and children in considerable detail.

It has perhaps been too seldom appreciated by the medical profession at large that the development of allergy to tuberculin is accompanied in many instances by rather stormy symptoms and fairly characteristic signs or radiographic changes, which can often be recognized by careful study, and Doctor Thomas, in calling attention to the fact, is performing a useful service.

- 1 Jahrb. f. Kinderheilk., 1921, 95, 1.
- 2 Jahrb. f. Kinderheilk., 1927, 117, 313.
- 3 Am. Jour. Dis. Child., 1927, 34, 779.
- 4 Jahrb. f. Kinderheilk., 1921, 94, 102.
- 5 Am. Jour. Dis. Child., 1928, 36, 702.

## FREE FASCIAL GRAFTS—THEIR UNION WITH MUSCLE\*

### REPORT OF CASES

By S. L. HAAS, M. D.  
San Francisco

DISCUSSION by John Hunt Shephard, M. D., San Jose;  
Leo Eloesser, M. D., San Francisco; Sterling Bunnell,  
M. D., San Francisco.

A NUMBER of operative procedures, particularly the cure of hernia, depend upon the principle that fascia will unite with muscle.

### OBSERVATIONS OF SEELIG AND CHOUKE

In spite of the large number of successful hernia operations, Seelig and Chouke<sup>1</sup> concluded from their observations on recurrences after herniotomy that fascia will not unite with muscle. To further substantiate their claims they performed a series of experiments on animals in which they reduplicated the fascia lata to simulate Poupart's ligament and sutured the edge of the turned flap to the underlying muscle. In

\* From the Surgical Laboratory of the Stanford University Medical School and the Shriners' Hospital for Crippled Children, San Francisco.

\* Read before the General Surgery Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



every instance they found that the fascia lata was separated from the muscle by a loose areolar tissue. If the muscle was traumatized by the excision of a wedge and the fascia sutured to the raw muscle, there was an attempted union which was complete in only one instance. When a pedicle flap was passed through a tunnel in the muscle, they found that at the places where the fascia came into contact with intramuscular connective tissue (perimysium) it fused and became firmly anchored. Where the perimysium was scanty, however, the fascia strip lay in its tunnel with practically no evidence of union. They claimed that it was useless to suture the internal oblique and transversalis muscles to Poupart's ligament because they would fail to unite unless the muscles had been vigorously traumatized. If they did unite it would not be permanent because of the inevitable tension that would occur when these structures were approximated.

#### EXPERIMENTS OF KOONTZ AND OTHERS

Naturally these rather sweeping assertions aroused considerable interest and discussion, from the clinical as well as from the experimental standpoint. Koontz<sup>2</sup> was one of the first to further investigate this important subject. In 1926, in a paper entitled "Muscle and Fascia Suture With Relation to Hernia Repair," he gave the results of his experiments on dogs. He endeavored to imitate an ordinary hernia repair, except that there was no sac to tie off, making the suturing of the internal oblique to Poupart's ligament the main feature of the operation. He obtained firm union in every instance. Koontz repeated the experiments of Seelig and Chouke, elaborating upon them to the extent of removing, on one side, the loose areolar tissue from the undersurface of the fascia lata, while on the opposite side of the animal it was not disturbed. The experiments in which the areolar tissue was removed resulted in firm union with the underlying muscle, while in those in which it remained there was no union. It was claimed that the failures of Seelig and Chouke were due to the fact that they did not remove this thin layer of areolar tissue.

Seelig and Chouke<sup>3</sup> independently repeated their previous experiments, scraping the adipose layer from the fascia lata, as they had done in their first experiments, but had failed to state specifically in their article. They obtained the same results as in the first instance, namely, that the reduplicated fascia failed to unite with the muscle.

Rosenblatt and Cooksey<sup>4</sup> made the same experiments that Seelig and Chouke had found unsuccessful and obtained exactly opposite results. They found, as had Koontz, that in the cases where they removed the areolar tissue from the fascia there was a firm union, while in those where it was allowed to remain there was but a slight union. They also sutured the rectus muscle to Poupart's ligament after removing the loose areolar tissue, and secured firm union in every instance.

It is difficult to explain the discrepancies in the results obtained by these investigators who performed the same experiments with the same technique. Hertzler,<sup>5</sup> in commenting on these differences, offered the following suggestions, using his experiments and clinical observations as the foundation for his opinions. He found, in studying the healing of wounds, that the proximity of any fat-bearing tissue prevented the process of regeneration because fibrin bundles could not form in the presence of fat. He stated that it was the traumatic reaction which actuated the fibrin formation. This in turn resulted in the generation of fibrous tissue which performed the union. Therefore, he claimed, to obtain a union between Poupart's ligament and muscle the sutures must be tied tightly enough to traumatize the muscle. He believed that the difference in the results obtained by Seelig and Koontz was due to the fact that Seelig made his sutures loose while Koontz made his very tight. The preponderance of proof, however, seems to favor the positive findings that a union does take place between fascia and muscle.

Regardless of this belief that muscle and fascia will unite there have been a number of recurrences after herniotomies. Because of these circumstances, some supplementary method of operation was sought which would give more satisfactory and lasting results. This was achieved by Gallie and Le Mesurier by using fascia in the repair of hernia. It is also to be noted that McArthur<sup>6</sup> as early as 1901 had utilized strips of the tendinous portion of the external oblique muscle for suture purposes in hernioplasty. He found, experimentally, that the tissue healed *in situ* without absorption or sloughing.

#### TRANSPLANTATION OF FASCIA

The transplantation of fascia was placed on a firm clinical basis by Kirschner<sup>7</sup> twenty years ago. There has always been, however, some doubt as to whether this transplant survived as such, or whether it was replaced by ingrowing tissue. A vast amount of experimentation has been done on this subject, some of which will be reviewed, briefly, in this paper.

Kleinschmidt<sup>8</sup> found, as a result of his work, that grafts placed under the skin showed little replacement while those put into muscle defects and subject to tension showed alterations in thickness, partial disappearance of portions not under tension, and partial replacement.

Kornev<sup>9</sup> observed similar changes and found that fascia transplanted into defects in a tendon was transformed into a fibrous tissue intimately interwoven with and practically indistinguishable from the tendon.

Gallie and Le Mesurier<sup>10</sup> found that a re-implanted piece of fascia lata showed practically no change and remained alive. In the early stages there was a little inflammatory edema which disappeared in three weeks, while in specimens examined after a year there was nothing to indicate that the cells or fibers had changed in any way. These two men emphasize the importance of re-



moving the areolar tissue, because if it be allowed to remain the strength of the union will not exceed that of the fat tissue. As a result of their work the use of fascia suture in hernia repair has become a successful clinical procedure.

Neuhoff<sup>11</sup> concluded from his experiments that the transplanted fascia was not preserved as such but was gradually replaced by fibrous connective tissue which closely resembled the fascia. He believed that the replacement was gradual and often might not be complete a year after the operation. The end result appeared to be a cellular connective tissue which occupied the framework and largely maintained the form of the original graft.

The proof of permanent viability of the graft has not been established. The replacement phenomena are of very gradual evolution, the size of the graft is maintained and the result and purpose for which the transplantation has been performed is ordinarily achieved.

The clinical applications of transplanted fascia cover a wide field in surgical practice. It is sufficient, however, to call attention to its uses as suture material in herniotomy, in joint capsule repair, filling in dura and pleural defects, ventral hernia, the repair of hollow viscera and the organs of the body, arthroplasty, and in tendon and muscle repair, to indicate its clinical significance.

#### USE OF PRESERVED FASCIA

These and other applications of transplanted fascia were followed by the institution of the use of preserved fascia as a surgical procedure. This development was stimulated by the work of Nageotte and Sencert.<sup>12</sup> Nageotte, as a result of his experiments, concluded that the fibers of connective tissue were inert coagula formed from living cells, and that when these were transplanted after preservation they did not act as a foreign body. The preservation did not change either their physical or chemical characteristics because they were lifeless in the animal just as they were in the alcohol. The dead cells of the graft were indistinguishable from the normal tissues.

Koontz,<sup>13</sup> in a series of experiments, found that fascia preserved in alcohol and then transplanted into a defect in fascia intermingled so closely that it was almost impossible to distinguish the dead from the living tissue. Heterografts took just as well as homografts. Because of the success which he attained in his experimental work he felt justified in utilizing preserved fascia for the cure of hernia in man. He followed, in general, the method used by Gallie and Le Mesurier<sup>10</sup> in applying the preserved fascia lata of the ox for suture material in hernia repair, and obtained successful results.

Rosenblatt and Meyers<sup>14</sup> performed a series of experiments in which they sutured the edge of the rectus muscle to Poupart's ligament with preserved ox fascia and tendon sutures. The muscle united firmly with Poupart's ligament. By that time the preserved fascia sutures appeared slightly smaller than at the time of the operations, and there was some evidence of foreign body reaction. This absorption and foreign body re-

action of the transplanted preserved fascia is contradictory to the findings of Nageotte and Koontz.

It would not have been surprising if a dispute had arisen regarding the union of transplanted fascia with muscle, because in cases of this kind the conditions are entirely different from those in which the tissues to be united are in their normal environment with their nerve and blood supply intact. Where transplanted fascia is utilized its vitality is affected by the severance of its normal blood and nerve supply and its power to proliferate is accordingly diminished. However, although Nageotte claims that fascia is an inert tissue, we know that healing does occur when fascia is sutured to fascia in the repair of a wound, or when a fascial transplant is placed in a fascia defect.

#### WHAT CONSTITUTES UNION BETWEEN FASCIA AND MUSCLE

The question may arise as to whether or not the muscle cells are expected to take an active part in uniting the muscle with the transplanted fascia. In order to create uniform criteria and avoid confusion, it seems advisable to state definitely what is to be interpreted as constituting a union between fascia and muscle. The muscle cells or fibrils, which are arranged in bundles and groups of bundles, are highly specialized and possess limited powers of proliferation and regeneration. On the other hand, the connective tissues which surround the muscle's cells and fibrils and the muscle's bundles (respectively, endomysium and perimysium) are nonspecialized and do possess the properties of active proliferation. Because of this fact they quite naturally would be expected to play the major rôle where a reparative response is necessary. However, regardless of whether it is the connective tissue elements or the muscle cells themselves which are most actively engaged in the process, a union between muscle and transplanted fascia is considered successful whenever the two tissues are intimately and completely united.

#### EXPERIMENTS MADE IN THIS STUDY

The stimulus for the work, which will be reported presently, on the subject of transplanted fascia was produced by the institution of the Mayer operation.<sup>15</sup> This procedure depended upon the ability of a piece of transplanted fascia lata to unite with a raised portion of the trapezius muscle.

In order to study the results of suturing transplanted fascia to muscle, a series of six experiments were performed, under general ether anesthesia, upon dogs. In each of these experiments an incision was made on the outer side of the thigh through the skin and fat to the fascia lata, and a section of fascia of the desired length and width removed for use as a free graft. This was followed by a second incision which exposed the tendons of either the semitendinosus or semimembranosus muscle on the inner side of the knee-joint. A section of muscle and tendon was then excised where the muscle merged into the



tendon. A piece of folded free fascia graft was sutured into the gap which had been made between the belly of the muscle and the cut end of the tendon. The animals were killed under anesthesia after the desired time had elapsed and the specimens fixed for microscopic study.

**EXPERIMENT 1.**—Dog T4, left, sixteen days.

**Operation.**—A piece of fascia lata, from which the fat had been removed by scraping both surfaces with a scalpel, was taken from the outer side of the thigh. Through a second incision on the inner side of the leg, just above the knee-joint, the tendon of the semimembranosus muscle was exposed and severed at the point of its junction with the belly of the muscle. The piece of fascia was then attached with silk sutures to the muscle, on one end, and to the tendon on the other.

**Gross Findings.**—The fascia lata was found firmly united at its upper end to the muscle, and at its lower end to the tendon. It was impossible, even with the application of a considerable amount of force, to tear the transplanted fascia from the muscle. The fascia was swollen and somewhat edematous.

**Microscopic Findings.**—At that early period there was a close union between the transplanted fascia and the muscle, there having been a gradual transgression from one to the other. At the site of the union the muscle fibers were broken up. The cross striations were much less distinct and gave the muscle a hyaline-like structure. At the ends of the muscle fibers there was a marked multiplication of the nuclei, which appeared to be the result of the proliferation of the nuclei of the muscle fibrils themselves as well as of the endomysium. In places the ends of the muscle fibrils were broken up into strand-like areas which joined the fibers of the transplanted fascia. (Fig. 1). There was,

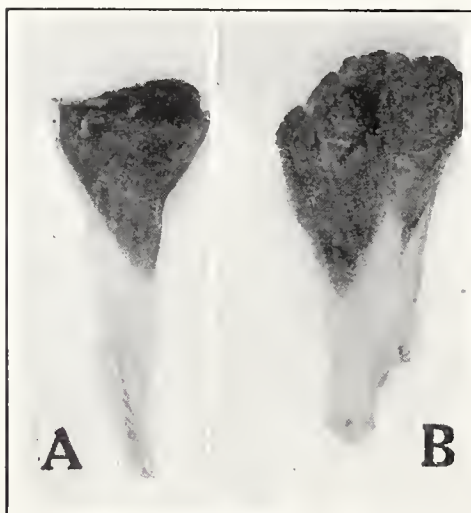


Fig. 3 (Experiment 6. Eighty-five days).—Gross specimens showing normal tendon (A) and artificial tendon (B) formed by suturing free fascia graft into muscle.

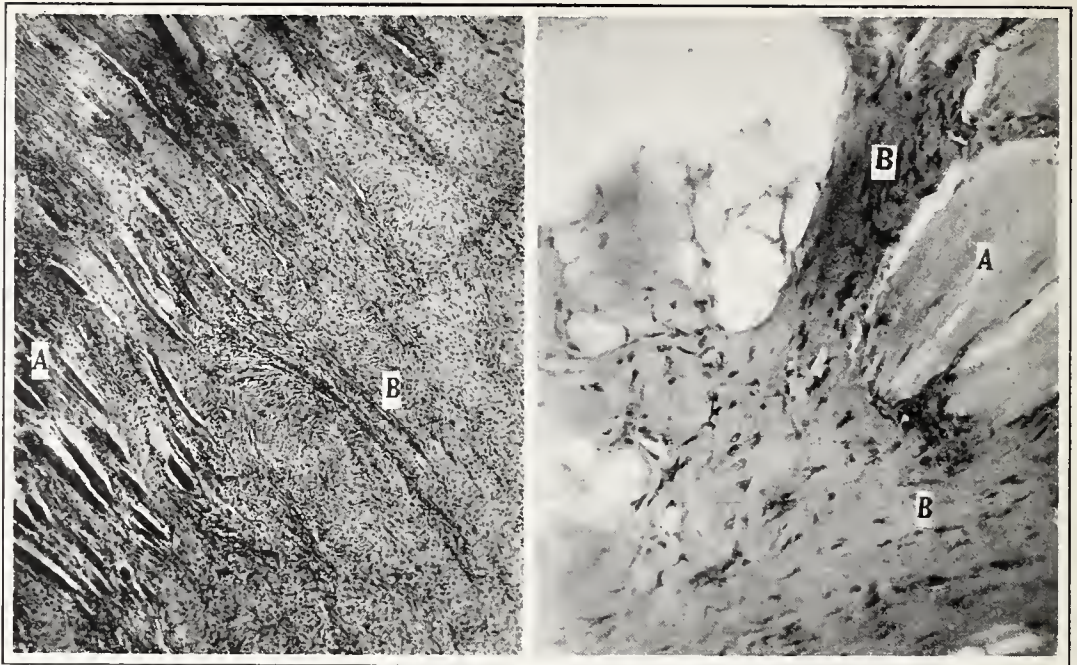


Fig. 1. (Experiment 1. Sixteen days).—Union of transplanted fascia lata with muscle. There is a close intermingling of the endomysium with the fascia. Notice the changes in the muscle fibrils. A. Muscle. B. Transplanted fascia.

Fig. 2 (Experiment 3. Sixty-six days).—High magnification to show the changes in the muscle fibrils at the site of union. A. Muscle. B. Transplanted fascia.

likewise, an increase in nuclear elements of the fascia at the place of union. The transplanted fascia showed no evidence of degeneration. Some remnants of the transplanted fascia were found near the junction. One cannot say definitely, but it appeared that the muscle fibrils may have shared in forming the union between the muscle and the fascia. The endomysium (surrounding the muscle fibrils) and the perimysium (surrounding the bundles of muscle fibrils) most likely took the greatest part in the process, but there was evidence that the viable elements of the transplanted fascia had multiplied and shared in the fusion.

**EXPERIMENT 2.**—Dog 1, left, twenty-four days.

**Operation.**—A piece of fascia lata was removed from the outer side of the thigh. The tendon of the semitendinosus muscle was exposed and severed at the point of its junction with the muscle. The piece of fascia lata was sutured into the gap.

**Gross Findings.**—The fascia had healed in so well that the line of union was hardly discernible.

**Microscopic Findings.**—There was a closer and denser intermingling of the muscle and fascia at the line of union than was found at the earlier period. There were, as in the earlier stages, signs of the degeneration of the muscle ends, and, in places, fibrous strands extending into the fascia suggested that a direct attempt was being made by the fibrils to share in the union. The transplanted fascia appeared denser than in previous stages and was assuming a more tendinous structure. The vascularity of the tissue was increased.

**EXPERIMENT 3.**—Dog 5, left, thirty-six days.

**Operation.**—The semimembranosus tendon was exposed and a section of tendon and muscle was removed at the junction of the two. A piece of fascia lata was sutured into the gap.

**Gross Findings.**—The fascia was united firmly to the muscle. The fascia was spread out and appeared to have stretched.

**Microscopic Findings.**—At that stage there was a close penetration of one tissue into the other. There was, however, a noticeable amount of fat at the site of the union and upon the muscle. There was the same evidence as found in experiment two that the



muscle was taking an active part in the union (Fig. 2). The fascia was transformed and appeared more tendinous than in the previous stage.

#### EXPERIMENT 4.—Dog 3, left, sixty-three days.

**Operation.**—The tendon of the semitendinosus muscle was exposed and severed just above its origin in the muscle, and again about two centimeters from its insertion. A piece of fascia lata was sutured into the gap.

**Gross Findings.**—The transplanted fascia was attached to the muscle on one side only.

**Microscopic Findings.**—There was a very close union of the fascia and muscle elements. In some places there was evidence of the direct outgrowth of the muscle fibers into the fascia. The transplanted fascia was dense in appearance and more tendinous than in earlier stages.

#### EXPERIMENT 5.—Dog 2, left, eighty-two days.

**Operation.**—The tendon of the semimembranosus was exposed and a section about one and five-tenths centimeters in length removed at the junction of the tendon and muscle. A folded piece of fascia lata was inserted into the gap and sutured, with silk, to the muscle at one end and to the tendon at the other.

**Gross Findings.**—The transplanted fascia was found united firmly to the muscle at the upper end and to the tendon at the lower. In general appearance it had assumed the likeness of a tendon.

**Microscopic Findings.**—The muscle and fascia were closely united. It was noticed that the muscle near the site of the union appeared unusually wavy, a condition which suggested a transformation into tendon. The cross striations were still present in the muscle that had acquired this wavy structure. The transplanted fascia was denser than in the earlier stage and appeared tendinous.

#### EXPERIMENT 6.—Dog 5, right, eighty-five days.

**Operation.**—The semitendinosus muscle was exposed and a segment of muscle one and five-tenths centimeters in length was removed at the junction of the tendon and muscle. A piece of fascia lata was sutured, with silk, into the gap.

**Gross Findings.**—The fascia lata was found united firmly to the muscle and tendon (Fig. 3).

**Microscopic Findings.**—There was a very close intermingling of the muscle and fascia. The muscle had a slight wavy structure in places, but not to the pronounced degree of that found in the former experiment. In places there were collections of fat cells



Fig 5 (Case 2).—Specimen removed from patient five months after Mayer operation. There is a close intermingling of the muscle with the transplanted fascia. Compare with Fig. 1 from experimental series. A. Muscle. B. Transplanted fascia.

which were most likely transplanted with the fascia. The fascia resembled, somewhat, a normal tendon in histological appearance.

#### CONCLUSIONS IN EXPERIMENTAL INVESTIGATION

On gross examination, evidence of strong union between the transplanted fascia lata and the muscle was found in every experiment.

It is difficult to determine definitely the exact part played by the various cellular elements of the fascia and muscle in forming the union. The connective tissue cells of the transplanted fascia showed definite evidence of viability throughout the experimental period. There was considerable evidence of proliferation of the cellular elements of the transplanted fascia at the site of the union. The endomysium and perimysium appeared to have contributed the greatest amount of tissue response in forming the union, while the muscle cells proper showed some cellular activity and possibly took a minor part in the process.

#### CLINICAL STUDY

According to Mayer, Lange claimed that transplanted fascia could not be used to construct an artificial tendon because the fascia would not unite firmly with the muscle fibers. Notwithstanding this declaration made by Lange, Payr had, as early as 1913, reported successful clinical results which involved the union of a piece of transplanted fascia lata with the cut end of the trapezius muscle on one end and the tendon of the long head of the biceps on the other. Gallie interwove strips of fascia lata into the trapezius muscle and then inserted the ends of the fascia into the humerus, in the treatment of a case of paralysis of the abductors of the arm.

The successful results obtained by Mayer with his improved operation for deltoid paralysis added further evidence to substantiate the claims that transplanted muscle will unite with muscle. In this operation he sutured the piece of transplant to a portion of raised insertion of the trapezius muscle. After preparing a canal just posterior to

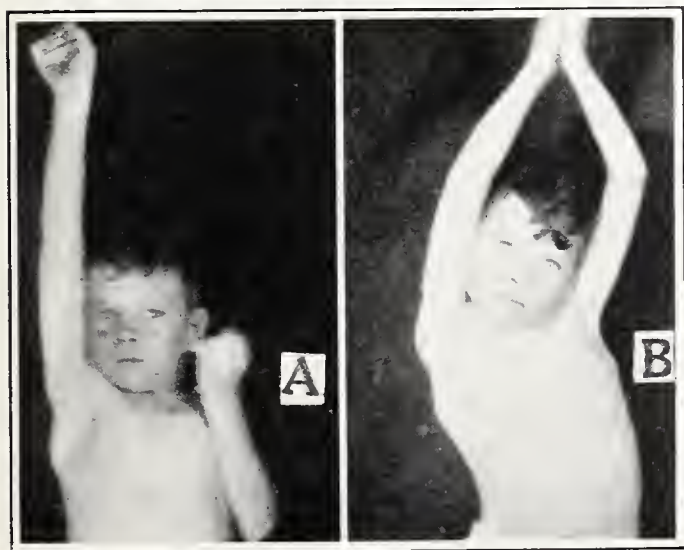


Fig. 4.—Patient from the Shriners' Hospital with paralysis of the deltoid muscle. A. Range of motion of the left arm before operation. Full abduction on the right. B. Showing almost complete abduction after the Mayer operation.



the acromion process he passed the artificial tendon through it, and downward beneath the deltoid, to a slot in the humerus near the insertion of the deltoid muscle. Mayer's explanation of the principle of his operation is that the pull of the trapezius muscle with its new prolonged fascia insertion holds the head of the humerus firmly into the glenoid cavity. Then as the scapula rotates, the arm being fixed into the glenoid cavity, the arm is carried to the horizontal position. After this the accessory muscles complete the abduction to the vertical position.

Further successful results have been obtained with this operation at the Shriners' Hospital for Crippled Children in San Francisco (Fig. 4). In two of these operations it was found that the fascia tendon, in its passage through the canal in the acromion process, had become adherent to its side, thereby preventing the pull on the humerus. This necessitated a second operation and afforded an opportunity to study the site of union between the muscle and tendon.

#### REPORT OF CASES

CASE 1.—R. O. Reoperation, three months after original operation. An incision was made into the old operative scar, down through the fat and fascia, to the site of the transplantation.

*Operative Findings.*—The muscle and transplanted fascia were firmly united. There was a close intermingling of the two tissues, with a gradual grading off into the tissue which resembled a normal tendon. Where the artificial tendon passed through the canal, in the acromion process it was found adherent, on one side, to the bone. The fascia transplant was freed from the bone and a piece of transplanted fat wrapped around the fascia to prevent further adhesions.

CASE 2.—N. A. Reoperation, five months after original Mayer operation. An incision was made into the old operative scar, through the fat and fascia, to the site of the transplantation.

*Operative Findings.*—The suture line of the fascia and muscle could hardly be distinguished. There was a gradual transition from the muscle to the artificial tendon. The union was very firm. Within the outer layer, where the muscle projected down into the tube, the merging of the two tissues was not so close. The transplanted fascia was found adherent to the sides of the bony canal through the acromion process. The artificial tendon was freed and wrapped with a free graft of fat. A small piece of muscle and fascia was removed at the site of union for microscopic study.

*Microscopic Findings.*—There was a close intermingling of transplanted fascia and muscle. The endomysium and perimysium were closely united to the fascia (Fig. 5). A portion of the muscle close to the line of union was of hyaline-like structure with loss of the cross striations. This same appearance was seen in sections of similar cases in the experimental study. It is possible that the muscle cells proper were undergoing a fibrous transformation and shared in the uniting process. The transplanted fascia was well stained throughout, and in places appeared very much like a normal tendon.

#### CONCLUSIONS FROM CLINICAL CASES

The results derived from this clinical study prove conclusively that transplanted fascia will unite firmly with muscle.

The microscopical study revealed that there was a close intermingling of the tissues involved and that the most active agents in the uniting process were the perimysium, the endomysium, and the

viable cellular elements of the transplanted fascia. There was even a suggestion that the muscle cells themselves may have shared in the process.

#### SUMMARY

1. Muscle will unite with transplanted fascia.
2. The perimysium and endomysium of the muscle play the major rôle in forming the union with the fibrous tissue element of the fascia.
3. The transplanted fascia seems to engage actively in the process of union.
4. There is some evidence that the muscle cells may undergo a fibrous transformation and share in the union.

Four Fifty Sutter.

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#### DISCUSSION

JOHN HUNT SHEPHARD, M. D. (Medico-Dental Building, San Jose).—Doctor Haas' experiments and his microscopic studies of the results beautifully show that fascia and muscle will unite when placed in proper apposition.

From a practical point of view, it matters not whether in this union the perimysium and endomysium of the muscle or the muscle cells themselves play the important rôle. Like the debated question of the fate of bone transplants, the desired end is accomplished, though the academic question of the exact part played by the various cells is not completely answered.

The use of fascial strips for suture material in the repair of herniae seems to me to be based upon a misconception of the true function of sutures.



Without entering into a discussion of the relative importance of the proper treatment of the hernial sac and the rearrangement of the fascial relationship, we do desire to secure firm union throughout the entire line of fascial approximation.

Sutures, whether they be of catgut, animal tendons, fascial strips, silk, or silver wire, serve a purpose similar to the screw clamps used by the cabinetmaker in veneering wood, and unless union of the coaptated tissues takes place between the sutures as well as at their site, the union will be very weak. Any non-irritating suture material which will retain the tissues in proper apposition sufficiently long for union to occur accomplishes all that can be asked of it.

I believe that the careful removal of the areolar tissue from the fascia along the line of coaptation, as emphasized by Koontz, is a very important detail in hernial repair.

The use of fascia for the repair of defects in tendons and joint capsules, for the establishment of accessory supporting ligaments or in arthroplasty is another matter.

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LEO ELOESSER, M.D. (490 Post Street, San Francisco).—Doctor Haas has again presented us with a careful and interesting piece of work. The evolution from living fascial sutures to preserved ones is curious. It seems to me a rather complicated way of getting back to catgut; for this material, consisting of the tough intestinal submucous tissue, cannot much differ in biologic properties from preserved fascial strips.

I should like to know from Doctor Haas under what tension the fascial strips were implanted, and what part immediate resumption of function has in the fasciomuscular union. Will union persist if the fascia is implanted under a tension considerably greater than that of the normal tendon, or will it give? What becomes of the fascia if no demands are made upon it; if it is attached to the muscle and one end left free?

Many substances seem to unite with muscle in a clinically satisfactory way. Thus Lexor and Eden used tough strips of subcutis.

Doctor Haas' paper gives food for reflection on a number of still unsolved problems.

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STERLING BUNNELL, M.D. (516 Sutter Street, San Francisco).—The free fascial or tendon graft has passed the experimental stage sufficiently to be more generally used than it is. Certain aspects, however, are still to be learned, and Doctor Haas' contribution is an excellent one. He has tackled the problem in his usual careful and scientific way and found out the facts for himself. I entirely agree with his conclusions.

From my personal experience in the last fifteen years I have records of four hundred and sixty-one free grafts of fascia and tendon, but have had no experience in using dead prepared fascia. This includes their use in repairing torn ligaments (as in the knee or ankle joints), correcting chronic dislocations, reconstructing crucial ligaments, replacing damaged tendons, connecting muscles to tendons including large tendons (as biceps, hamstrings, and Achilles), repairing annular ligaments and hernias and in tenodesis.

I have frequently exposed these grafts at subsequent operations and determined their condition. In the first few weeks the grafts are swollen and edematous, but later have the normal appearance of fascia or tendon. I am convinced that they live as such though some cells in the depth of the graft may undergo replacement. The surface cells are better located for nutrition during the first week. Practically the grafts have normal appearance and normal function over years and hypertrophy in response to use.

They grow solidly to bone, tendon or muscle if properly contacted. For this no areolar tissue should

intervene, and if lateral union is desired the fascia or tendon should be scraped or cut clean. For union with bone an osteoperiosteal contact is necessary. Muscles have a large connective tissue constituent near their tendinous attachment which gives firm union. A lateral union of a belly of an unscraped, untraumatized muscle is weak. A union to the cut end of muscle bundles is strong in proportion to the percentage of connective tissue constituent such as endomysium and perimysium, as muscle itself has very poor regenerative power. Therefore a stronger union results near the end of a muscle, as in Doctor Haas' experiments, than in the fleshy belly. If a natural tendon or a tendon graft is left unattached at one end it will in about two months become swollen, yellowish, brittle and weak from the degeneration of disuse. A tendon or fascial graft which is given the function of resisting repeated tension will hypertrophy in response to the demand. If, however, the force to which it is subjected is too great and too constant, the tissue, whether natural or a graft, will atrophy and yield. In supplying tendon grafts for large muscles, I have found very large grafts to be necessary. Doctors Gallie and Le Mesurier report that under the extreme and constant strain imposed after certain tenodeses about the foot that the tendon yielded. In contrast, tendon grafts in the fingers, which have less constant strain, show a slight tendency to shorten.

In using fascial grafts it is important not to make them in the form of a tube, as the inner surface will have no contact with the surrounding tissue for nourishment by blood and lymph. Serum will collect and the cells lining the uncontacted surface will degenerate. The transmutation of muscle tissue into tendon, as Doctor Haas observed in experiment five, is frequent in the sternocleidomastoid in wry-neck, as shown in the strong cord of tendon found running through the length of the muscle.

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DOCTOR HAAS (Closing).—In Doctor Shephard's discussion he says that the material used for suturing, whether it be catgut, animal tendon, silk or silver wire, is not important as long as the union is ultimately accomplished. However, if the statistics show more successful unions where fascia rather than other suture material has been employed it must be admitted that fascia has advantages over other sutures. Gallie and other operators claim these advantages, both in primary repairs and the treatment of recurrences of cases in which other suture material had been used.

If the live sutures (fascia grafts) take an active share in the uniting process, the advantage in using them is obvious and the analogy between them and the clamps in veneered wood fails to be convincing.

In reply to Doctor Eloesser's questions, the fascia sutures are implanted under very slight tension. When the subject recovers from the anesthetic the tension increases. Function is then established, but in spite of the early use the suture line holds firmly.

In placing the individual sutures, an effort is made to avoid cutting through the muscle fibers in the same manner as one would in closing an abdominal wound or other muscular defect. If the fascia is placed under too much tension there is the chance of a tearing at the line of suture. A fascia strip attached at one end only, will perform in the same manner as a covering fascia, while the fascia under muscle pull develops a tendon-like structure.

The use of preserved fascia has not been covered in this paper. My experimental work on that subject tends to illustrate that it is a less favorable suture material than living fascia. A review of this work has not been published.

I was pleased with Doctor Bunnell's discussion because of his extensive clinical experience in the use of transplanted fascia. After all, it is only by correlating the clinical and experimental results that a definite and practical conclusion may be obtained.



# INTRAVENOUS INFUSION OF GLUCOSE— WITH REPORT OF ANAPHYLACTOID REACTION

## REPORT OF CASE

By E. VINCENT ASKEY, M. D.

AND

ERNEST M. HALL, M. D.  
Los Angeles

DISCUSSION by P. J. Hanzlik, M. D., San Francisco;  
Jean Oliver, M. D., Brooklyn; R. W. Lamson, M. D.,  
Los Angeles.

A GREAT deal of literature is available in the study of anaphylaxis. It is rather meager, however, concerning those reactions, somewhat similar, which are elicited by a variety of non-protein substances. Such phenomena have been named anaphylactoid reactions. Reports of the study of these reactions and theories as to their causes are confined to the last ten years.

## PAST EXPERIMENTAL WORK

It has been shown by Rowntree<sup>1</sup> that, by the administration of excessive amounts of water, a so-called water intoxication can be developed. This condition is manifested by restlessness, nausea, tremors and twitching of the muscles, convulsions, collapse, stupor, and coma. Unless relief be provided, death occurs. It is thought to be due to a disturbance in the salt to water equilibrium of the body. Experimental work by Greene and Rowntree<sup>2</sup> along this line has shown that in such conditions there is a change in surface tension; plasma and hemoglobin volumes; and slight disturbance in the albumin-globulin ratio. Salt changes of the serum and hemoglobin show great differences. There is a noted decrease in heat production with resultant lower temperature of the body. That such marked changes occur with a variation of water content only, suggests that perhaps that factor alone may be causative of reactions that have otherwise been blamed on specific alien substances.

It is interesting to note the results where substances known to have caused anaphylactoid reactions have been tested *in vitro*, and *in vivo*, on blood, plasma, and serum.

Karsner and Hanzlik<sup>3</sup> have shown that arsphenamin and various colloids, such as acacia and gelatin, produce agglutination of red blood cells *in vitro*. They believe that reactions following the use of such substances are due, not to the mechanism of anaphylaxis, but more likely because of the agglutination of cells *in vivo*. Further work by Oliver and Yamada<sup>4</sup> has shown, in experimentation on the nature of reactions found following the use of arsphenamin, that such reactions are the result of the agglutination of the red blood cells. Following the agglutination there occurs embolism and the picture seen is one such as follows multiple fat embolism. They state that reactions occurring later, where nonlethal doses were given, were the result of parenchymatous degeneration of the tissues following embolism.

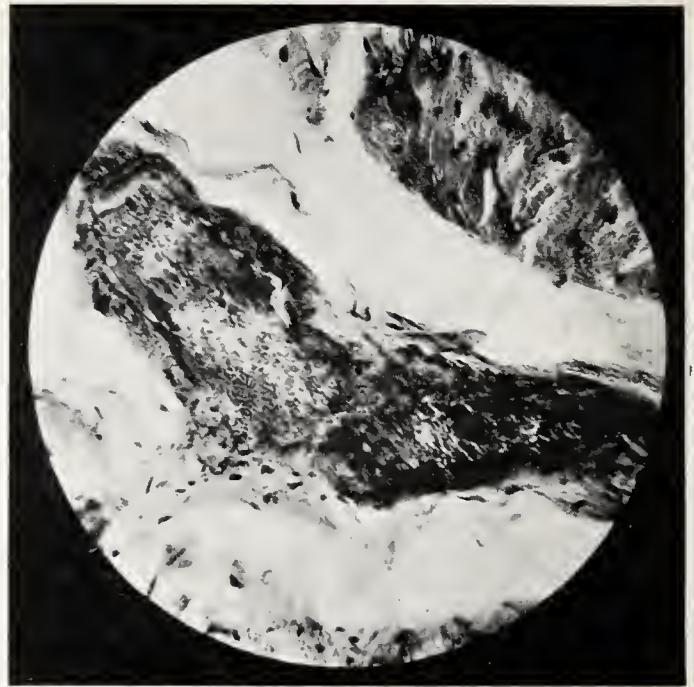


Fig. 1.—Vein in epicardium showing agglutinated red blood corpuscles. (x 630.)

The theory that agglutination of the cells is dependent on the physical properties of the arsphenamin solution has been advanced by Oliver and Douglas.<sup>5</sup> Agglutination occurs only in the presence of an electrolyte which in some way causes a change in the degree of dispersion of the arsphenamin which has been absorbed by the red blood cells.

The action of arsphenamin, however (*i. e.*, the agglutination action) is inhibited by many hydrophilic colloids; which may be explained by adsorption of the arsphenamin by the protective colloid, according to Oliver and Yamada.<sup>6</sup>

Agglutination is a process separate and distinct from coagulation, a point which is emphasized by the work of Oliver and Douglas.<sup>7</sup> They have shown that arsphenamin produces incoagulability of blood, both *in vitro* and *in vivo*, and that such action is chiefly on the fibrinogen rather than on the thrombin.

In the studies of Hanzlik and others<sup>8</sup> the most important change found was uniform, though quantitatively variable, lowering of the surface tension, without relationship to physical and chemical properties of the agents used (copper, arsphenamin, pepton, acacia, agar, and toxified serum). The agent most efficient in lowering surface tension is also the most efficient agent for eliciting anaphylactoid reactions. The next most important change is a general increase in the albumin-globulin ratio, regardless of the agent used.

Careful study by Hanzlik<sup>9</sup> of the clinical symptoms, objective and autopsy findings, in cases showing anaphylactoid reactions discloses that such reactions are characterized by many changes not only in the physical state of the blood, but in the functional activity of the cells of the other tissues of the body as well. Due to physical changes in the blood, are found thrombosis, fragmentation and agglutination of the corpuscles, flocculation of the plasma, production of fibrin,



and increase of blood platelets. Among the functional changes of the tissue cells are: increased permeability and the production of faulty metabolites. These are the result of, or produce, great changes in osmotic pressures and changes in surface tension.

Hence, we may find, besides the agglutination and other changes of the blood itself, perivascular edemas, hemorrhage and congestion in all the tissues of the body. If death does not occur early, the later signs, due to parenchymatous degeneration, elsewhere referred to, may be found. These different findings put together agree with the idea that direct contact of blood with foreign agents results in a disturbance of the blood colloidal equilibrium.

This disturbance may be of slight or severe degree, depending on the amount of foreign agent involved, the manner of administration, and the idiosyncrasies of the patient. It may be manifested clinically by only the slightest symptom, such as a chill of short duration; or it may result in death either from the sudden shock, primarily; or secondarily from one or more of the physical-chemical reactions detailed above.

We wish to report the findings in an autopsy of a patient who died forty-eight hours after an intravenous infusion of glucose solution.

#### REPORT OF CASE

The patient—a white woman, age thirty-seven years, the mother of two children, the youngest fourteen months old—had been admitted to the hospital complaining of abdominal pain, fever, and occasional chills. Provisional diagnosis was made of: (1) Acute pelvic infection. (2) Large cystic ovary. (3) Adenoma of thyroid. She was placed on temporary symptomatic treatment for pelvic peritonitis. After two days she was better, but her urine examination showed abundant acetone and diacetic acid. She was quite nauseated and, due to inability to absorb sufficient fluid by rectal drip and in order to combat apparent acidosis, the resident physician was ordered to give the patient, slowly, 1000 cubic centimeters of 10 per cent glucose solution intravenously. This was



Fig. 2.—Coronary arteriole and venule containing hyaline thrombi. (x 430.)



Fig. 3.—Coronary vessel containing clumps of hyaline thrombus. (x 150.)

done uneventfully. About twenty minutes following this procedure the patient had a severe rigor, lasting twenty minutes, the heart rate rising to 140. Hot water bags were applied and stimulation was given. The patient then reacted, with her temperature rising to 105 degrees. She passed a good night, however, and her temperature the next day was normal. At 2 o'clock in the afternoon the resident physician reported that she was feeling well. At 3:15 p. m. she was suddenly taken with shock, extreme cyanosis and complete right-sided hemiplegia, with labored stertorous breathing and coma. This continued until about 6 p. m., when the patient came out of coma and began to clear mentally, but was unable to talk, protrude tongue, or use muscles of right face, right arm, and right leg. She could, by movement and use of her left side, however, show that she understood questions.

This condition continued throughout the next day, with slight improvement of tongue movement and ability to swallow. Her temperature, following the stroke, was subnormal but later began to rise. About forty-eight hours following the stroke, the patient stopped breathing, though the heart continued to beat under artificial respiration for one hour. Permission for an autopsy was obtained.

**Clinical Diagnosis.**—(1) Embolism, left internal capsule of the brain, with right-sided hemiplegia. (2) Acute pelvic infection with local peritonitis. (3) Ovarian cyst. (4) Adenoma of the thyroid.

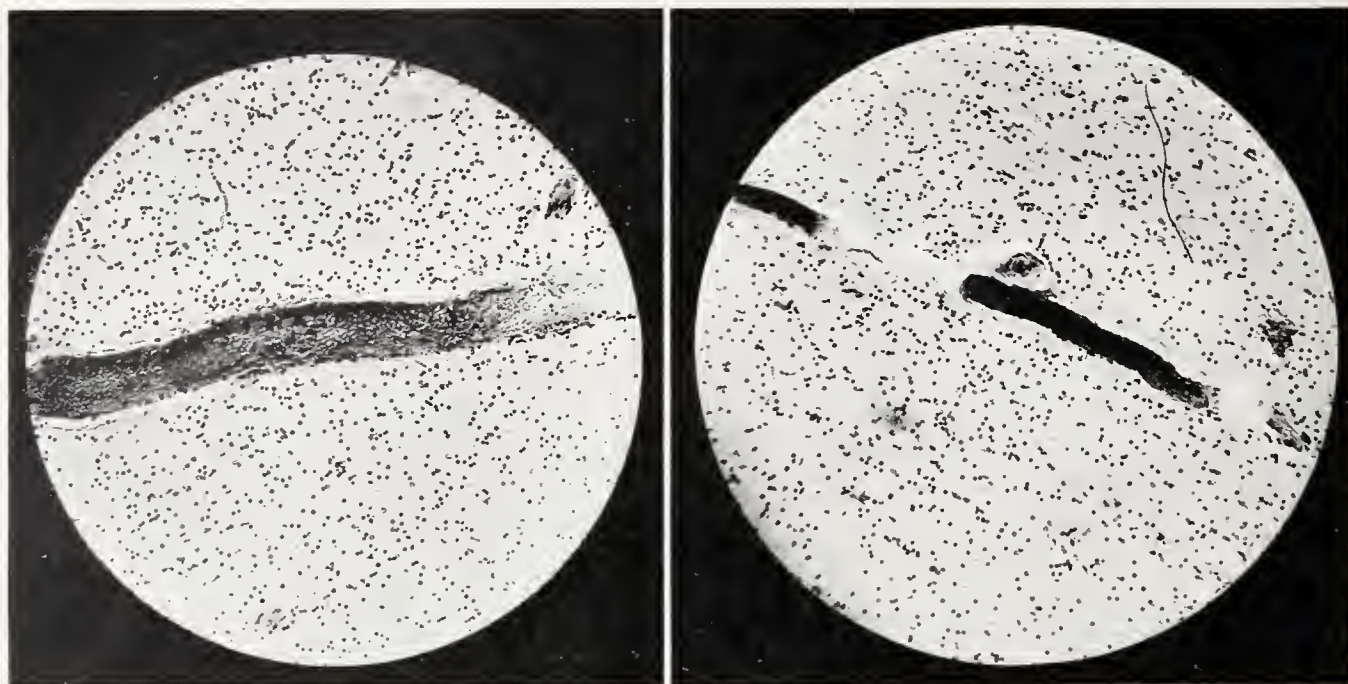
**Anatomical Diagnosis.**—Oöphoritis, acute, purulent (streptococcal); early malignant cystadenoma of ovary, papillary, bilateral; thrombosis, multiple, cerebral arteries with softening of brain; thrombosis, coronary vessels with necrosis of heart muscle; thrombosis of heart (mural thrombi); embolism of renal artery with infarction of kidney; goiter, adenomatous.

**Autopsy Report.**—The body is that of a strongly built, well-nourished woman of about thirty-five years. The body is still warm. The right pupil is slightly wider than the left. Teeth contain many fillings. There is a moderate enlargement of the thyroid in the midline of the neck, a slight enlargement on the right side. No enlargement of the superficial lymph nodes and no edema.

Marked adiposity of abdomen and chest.

The liver projects four centimeters in the right midclavicular line. The omentum is slightly adherent in the pelvis. There is a cyst of the right ovary the size of a grapefruit which completely fills the pelvis.





Figs. 4 and 5.—Cerebral vessels containing hyaline thrombi. (x 100.)

The appendix is adherent to the cyst and also to the sigmoid. The peritoneum is smooth. No excess fluid in the peritoneal cavity.

The left lung is free of adhesions and no excess fluid is present in the pleural cavity. The right pleural cavity is almost obliterated by fibrous adhesions.

The pericardium contains a moderate amount of blood-stained fluid. The heart is enlarged about one and a half times. The right auricle is greatly dilated and contains some small antemortem clots in the auricular appendage. The pulmonary artery contains fluid blood. The tricuspid and mitral orifices are normal. There are two small masses of thrombus on the free margins of the tricuspid valve and some small antemortem clots clinging to the posterior surface of mitral valve extending upward toward the aorta. Aortic valve is normal. Both the right and left ventricles appear to be somewhat dilated. The inner two-thirds of the muscle of the left ventricle has a pale, yellowish color apparently due to early necrosis.

The left lung is air-containing except for a small area of collapse in the lower lobe. No evidence of embolism. The bronchi and peribronchial lymph nodes are normal. The right lung is similar to the left except for a small Ghon tubercle in the upper lobe.

The spleen is slightly larger than normal, measuring 12.5x9x4 centimeters. The cut surface shows prominent markings, is pale red and firm in consistency. The capsule is smooth.

The left adrenal is normal. Left kidney of normal size, surface smooth and congested. On the cut surface the cortex appears very opaque, while the pyramids are congested. Toward the upper pole there is a pale yellow, recently formed infarct 3x3 centimeters. The right adrenal and kidney are similar to those on the left except that no infarct is present in the right kidney.

The urinary bladder is normal.

The cervical canal is somewhat dilated; measures 0.5 to 1 centimeter in diameter. The uterus is small, mucous membrane is very thin. Very small amount of thin exudate over the surface. A small pedunculated, subserous fibroid is attached near the level of the internal os. A cyst of the left ovary, about 7.5 centimeters in diameter, is imperfectly multilocular and contains two or three small (1 to 1.5 centimeters) papillomatous excrescences attached to the inner wall. There is a small quantity of thick yellow pus in two of the compartments. The left tube is adherent to the ovary. The larger cyst of the right ovary measures 12 centimeters in diameter. There are six to eight rough papillary nodules, 0.5 to 1 centimeter in

diameter and 3 to 4 millimeters high, attached to the outer surface of the cyst. The cyst is filled with clear straw-colored fluid. The lining is smooth except for one papillary nodule about one centimeter in diameter.

The duodenum, stomach, pancreas, gall bladder, and liver are essentially normal.

The small and large intestine and contents appear to be normal.

The skull cap is normal. The convolutions over both cerebral hemispheres are distinctly flattened and the pia is congested. The left hemisphere is larger than the right and distinctly softer. The vessels at the base of the brain are normal. Gross sections of the brain reveal a large rather indefinite area of beginning softening in the region of the internal capsule on the left side, involving the major part of the nucleus lentiformis, the anterior portion of the thalamus and a part of the hippocampus. The cortex is involved in a similar way in the upper two-thirds of the motor area on the left side. The pons, cerebellum, and medulla are normal.\*

#### COMMENT

It is reasonable to conclude that these findings are consistent with the anaphylactoid reactions discussed. In this case examination of the clots found in the heart showed the red cells very tightly clumped in small aggregates, indicating that agglutination had taken place (Figure 1). Smears from an ordinary clot reveal closely packed but evenly distributed corpuscles.

Early necrosis of the inner two-thirds of the heart muscle of the left ventricle was distinguishable grossly. Histological examination of the heart muscle revealed small hyaline, pink-staining thrombi (hematoxylin and eosin) in most of the small arteries (Figures 1, 2, and 3). Such hyaline thrombi have been shown by Flexner<sup>10</sup> to be caused by the agglutination and later fusion of red blood cells in the capillaries. The muscle cells showed changes seen in early necrosis, viz., swelling, pycnosis of nuclei and brick-red staining of the cytoplasm.

Large areas of early softening were discernible grossly in the left cerebral hemisphere, involving

\* Histologic and bacteriologic findings will be presented in reprint.



the internal capsule, nucleus lentiformis, and the anterior part of thalamus. A more superficial area was found involving most of the cortex in the upper two-thirds of the motor area. Sections of the cortex revealed softening of the brain substance. The smaller arterioles, including many of the capillaries, are filled with hyaline thrombi (Figures 4 and 5), and small collections of polymorphonuclear leukocytes are present in the perivascular tissues.

#### SUMMARY

1. A résumé of data regarding so-called anaphylactoid reactions is given wherein it is shown that all the different findings agree with the theory that direct contact of blood with foreign agents results in a disturbance of the blood colloidal equilibrium. Such disturbances cause varying degrees of clinical symptoms from slight chills to severe reactions which may result in death.

2. Autopsy findings are presented which are consistent with those anaphylactoid reactions discussed.

1501 South Figueroa Street. (E. V. A.)  
St. Vincent's Hospital. (E. M. H.)

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#### DISCUSSION

P. J. HANZLIK, M. D. (Stanford University School of Medicine, San Francisco).—Whether the cause of the reactions and result in this case are to be attributed solely to the use of the dextrose solution or not, Doctors Askey and Hall have directed the attention of physicians to possible dangers from intravenous injections. This they have done by making the fullest use of data whose significance might easily have escaped the attention of others.

The train of events in the case recapitulates well-known phenomena in animals injected with anisotonic and unbalanced solutions. The dextrose solution was hypertonic, lacked ions, and the volume employed diluted the blood perhaps 25 per cent. The short period in which the typical symptoms appeared and the generalized thrombosis, together with hemagglutination in the absence of bacteria at autopsy, which in this case was made early, are important items in the immediate cause of the reaction. Collectively, these considerations support, if not prove, the authors' contention that the injection caused an anaphylactoid reaction. Even if due allowance be made for the contributory rôle of the patient's clinical condition to her death, the rather sudden onset and the rapid and characteristic progress of the reaction following the

intravenous dextrose would require an unusual explanation. The condition of the patient suggests another possibility which indicates the need of caution before proceeding with intravenous injection. I refer to the well-known disturbed physical state of the blood in infectious disease, characterized by an increased sedimentation rate, a phenomenon which indicates cell surface changes preceding, or concomitant with, agglutination. It is probable that the intravenous injection of a hypertonic solution, under these conditions, would accelerate and complete the processes tending to disturb the colloidal phases of the blood. The occurrence of the reaction is, therefore, not at all surprising. The variations in degree and kind of the physical and chemical changes are considerable; for this reason the resultant disturbances range from scarcely demonstrable or moderate to marked, and even death, as appears to have been the case in this patient. Unfortunately the changes are not predictable or controllable. All the more reason, therefore, to appreciate the axiomatic principles of physiology—specifically, the physical-chemical changes which occur from the sudden introduction of foreign agents into the blood stream—and to exercise great caution in the administration and choice of remedial agents for intravenous use.

✽

JEAN OLIVER, M. D. (The Hoagland Laboratory of Pathology, Long Island College Hospital, Brooklyn). The case described by Doctors Askey and Hall is of especial interest in that it supplements and extends the findings of experimental work in animals. The anatomical changes which have been described in such work are chiefly vascular ones, namely, agglutination of red blood cells with immediate death, a result of capillary embolism. Tissue changes are as a rule absent, as there is insufficient time for their development.

In the present case the clinical symptoms of the first reaction following the injection of glucose seem to mark the time of red cell agglutination and capillary embolism, but since death did not occur until some forty-eight hours later a secondary complication of arterial thrombosis had sufficient time to develop, and the gross tissue changes of brain softening, heart necrosis and infarct formation. These were doubtless the immediate cause of the second "stroke" and subsequent death of the patient.

✽

R. W. LAMSON, M. D. (1930 Wilshire Boulevard, Los Angeles).—A decreased coagulability of the blood of the experimental animal during anaphylactic shock has been observed in dogs, rabbits, guinea-pigs, and recently in pigeons. In the animal last mentioned, however, it appears that the primary change in the blood is actually an increase in coagulability and that the decrease in this function is always secondary. Another worker has suggested that true anaphylaxis is due to a colloidal change taking place in the blood of the nature of precipitation and flocculation of the particles. It must be admitted that animal experimentation may not correctly explain reaction patterns in man, though these observations suggest that a similar mechanism was operative in the case reported above.

In certain other serious or fatal reactions that have followed infusion, the major substance injected did not come under suspicion. In some of these the reaction was attributed to sulphur or other substance dissolved from the rubber tubing which formed a part of the apparatus. In others an unfavorable hydrogen ion concentration of the solution was thought to be the causative factor. Another possibility is that a shock may follow the use of water that has been distilled a day or more before it was sterilized; it has been shown that certain bacteria will multiply in distilled water and in a day or more sufficient foreign protein may be present to produce a shock even though it is sterilized before injection. It would appear that these factors were not concerned in this case.



## QUINIDIN—SOME TOXIC EFFECTS\*

## REPORT OF CASES

By HARRY SPIRO, M. D.

AND

WILLIAM W. NEWMAN, M. D.

San Francisco

DISCUSSION by Garnett Cheney, M. D., San Francisco;  
John J. Sampson, M. D., San Francisco.

PAUL WHITE of Boston, in effect, has said that quinidin (with the possible exception of the nitrites) is the most valuable cardiac drug since Withering introduced digitalis. Men such as Thomas Lewis, S. A. Levine, R. L. Levy, Oppenheimer, and others, write with enthusiasm of this drug. We firmly believe in its great value, and yet despite its undoubted great worth quinidin is being only slowly appreciated and used by the profession in general. I think that this lack of use is due largely to the fact that it is a drug that cannot be used in any hit-or-miss fashion to treat a variety of indefinite cardiac ailments. It may be recalled that for a century after Withering, the ineffectual dosage of digitalis and its indiscriminate use concealed its real value.

## HOW QUINIDIN ACTS

Unlike digitalis and caffeine, quinidin is not of the least value in treating heart failure in general, since it is of use only in those cases in which heart failure is dependent upon the presence of certain arrhythmias. Quinidin has no favorable influence, as have those drugs, on cardiac tone and the vigor of the heart muscle contraction. It acts by its influence on the refractory period and conductivity of the heart muscle in such a way as to abolish certain irregularities of the heart beat, usually by stopping of the so-called circus movement, and that is all. Therefore it is far from a panacea for all heart diseases. On the contrary, the indications for its use are absolutely clear-cut, but the treatment with it must be well thought out and vigorously applied, and the results, if successful, are definite and unequivocal. Its use, therefore, requires, in the first place, the ability to diagnose accurately the more common cardiac arrhythmias.

It is not unusual when inquiring of a physician as to his feeling in regard to the value of quinidin to get a very half-hearted reply, and to discover, on closer inquiry, that he has been using it perhaps in pitifully inadequate doses to treat a cardiac condition the exact nature of which is not clear in his own mind.

In addition to the discouragement incident to the ineffectual dosage and ill-advised application of the drug, there is the further deterrent to its use that its administration is known to be at times dangerous and that fatal results occasionally follow its use, so that some physicians are afraid even to try it. It is with the hope that a better understanding of its indications, dosage, and dangers will result in its more effectual use that this paper is presented.

## INDICATIONS FOR QUINIDIN

The indications for the use of quinidin are, as I have said, clear-cut, and they are, for all practical purposes, the following:

1. To control extrasystoles (except those associated with heart failure) when they are causing distressing symptoms.
2. As a prophylactic against attacks of paroxysmal auricular tachycardia when the attacks come often enough to annoy or incapacitate the patient.
3. As a prophylactic against paroxysms of auricular fibrillation.
4. Most important, for the cure of certain carefully selected cases of chronic auricular fibrillation.
5. It has been used successfully in ventricular tachycardia.

If the use of the drug is confined to the above enumerated conditions there will be less dissatisfaction with the results. As to the proper dosage, and so far as any danger associated with its administration is concerned, there need be no apprehension in treating the first three conditions named: *i. e.*, for paroxysmal tachycardia, extrasystoles, and paroxysmal auricular fibrillation, four grains of quinidin sulphate in capsules, three times a day, will usually fill the requirements and there is no danger in such dosage. It is only with the attempt to stop auricular fibrillation itself that the practitioner enters onto dangerous ground, and it is largely with these dangers and how to avoid them that this paper will deal.

## QUINIDIN FOR AURICULAR FIBRILLATION

It must be clearly understood, in the first place, that in treating auricular fibrillation, quinidin is not to be considered a drug of last resort; it must be used only in carefully selected patients, and the first point in their selection is that they must be reasonably well compensated; that is, they must be able to move about the room without obvious dyspnea, there must be no edema or effusion present, the pulse rate must be 84 or less, and there must be no pulse deficit. If these requirements are not fulfilled the likelihood of a favorable outcome is poor. But even when these requirements are fulfilled it is found that there are still some fatalities. A majority of these fatalities are embolic in nature, and in a paper presented last year<sup>1</sup> we attempted to show a method by which patients could be selected so as to avoid those likely to have an embolic accident. That method was to select only those patients for treatment who had a vigorous heart action, as seen fluoroscopically, and I might say that none of our patients selected on that basis have had an embolic accident during the course of their treatment. But even when the danger of embolism has been eliminated we have had some rather startling experiences (three in the last year) with the use of the drug. These occurrences were due, in the strictest sense, to the toxic effect of quinidin on the heart muscle, and it is with this element of the danger in the use of quinidin that the rest of this paper will consider.

\* Read before the General Medicine Section of the California Medical Association at the fifty-eighth annual session at Coronado, May 6-9, 1929.



## TOXIC SYMPTOMS OF QUINIDIN

As stated before, it is only in the attempt to correct auricular fibrillation that toxic symptoms need be feared, as we have never seen them amount to more than a slight buzzing in the ears or an urticaria with the twelve-grain daily doses necessary to fulfill the other indications for its use. I have heard men say that they have seen alarming effects from five to ten grains of the drug. We have never seen bad effects from such small doses in a hundred or more patients treated in the last two years, and we are firmly of the opinion that such occurrences are coincident with its use rather than caused by it.

While susceptibility to the drug varies considerably, we have never seen serious toxic symptoms from less than a thirty-grain daily dose. The reason that the ability to recognize the earliest signs of toxicity is important is that it is frequently necessary to push the dose well above thirty grains into the realm of possible danger before a successful outcome is reached. Because of the slight but definite danger of toxicity as the thirty-grain limit is exceeded, some make it a rule not to go beyond this dosage, but unless one is willing to push well up beyond this point many successes will be missed. Our records show that thirty out of forty successive patients with auricular fibrillation and treated with quinidin, became regular and remained so for more than one month, sixteen of the thirty, or over 50 per cent, requiring well over a thirty-grain daily dose; and, moreover, there was no relation between the size of the dose necessary to produce regularity and the time that the patient's pulse remained regular after normal rhythm was established. Hence it is important that the stopping point be set not at some arbitrary dosage, but be regulated largely by the appearance of toxicity, making the recognition of its onset of the utmost importance.

## WARNING SYMPTOMS OF TOXICITY

The warning symptoms of toxicity as the dosage is increased are: increasing symptoms of cinchonism, *i. e.*, buzzing in the ears, dizziness, and later nausea and vomiting. If the patient is much distressed by such symptoms it is well to decrease the dose for the time being at least. A majority of the patients experience some slight distress before sinus rhythm is restored, this distress often amounting to a distinct nausea, while a few may even vomit a time or two. It is only when the vomiting becomes more persistent or the patient is distinctly dizzy and uncomfortable that we deem it wise to slack up in our dosage.

There are other signs giving more direct evidence of heart muscle poisoning which usually go more or less hand in hand with the above mentioned symptoms. The first of these is a speeding up of the ventricular rate. By a "speeding up of the rate" we do not mean an occasional rapid run of ten or fifteen beats; such short rapid runs are often the precursor of the establishment of sinus rhythm and are not to be viewed with alarm. It is a persistently rapid rate, a pulse of 125 or more, lasting for minutes or hours, that

calls for a reduction of dosage and more caution. A second sign is a distinct decrease in the volume of the pulse which may occur with or without a speeding up. Nurses are often prone to report changes in pulse volume which closer investigation fails to verify, so we physicians are apt to disregard their alarm cry of "Wolf!" However, with a patient under quinidin it is well to check up any such report by a blood pressure reading.

Another occurrence upon which we look with some apprehension is the appearance of extrasystoles. When extrasystoles become more frequent as the dosage of quinidin is increased, we think it best to stop the drug as we have never seen a favorable outcome under these circumstances; and we feel that under large doses of quinidin, extrasystoles, especially with a rapid pulse, are evidence of toxicity, probably a precursor of ventricular tachycardia which latter is an absolute indication for discontinuing quinidin. Make note that above we mentioned quinidin as a cure for ventricular tachycardia, but if this arrhythmia occurs during the course of quinidin therapy for other irregularities it then becomes a danger sign.

## VALUE OF ELECTROCARDIOGRAMS IN TOXICITY CASES

We have found in the cases that are not going smoothly, where the symptoms of toxicity are increasing and the pulse rate is going up, that the electrocardiogram gives valuable evidence of heart muscle poisoning, so that in those cases where we are in doubt as to whether to push the drug or to reconcile ourselves to failure in restoring sinus rhythm, we take an electrocardiogram and if it shows unfavorable changes from the tracing taken before starting treatment we feel that it is best to stop.

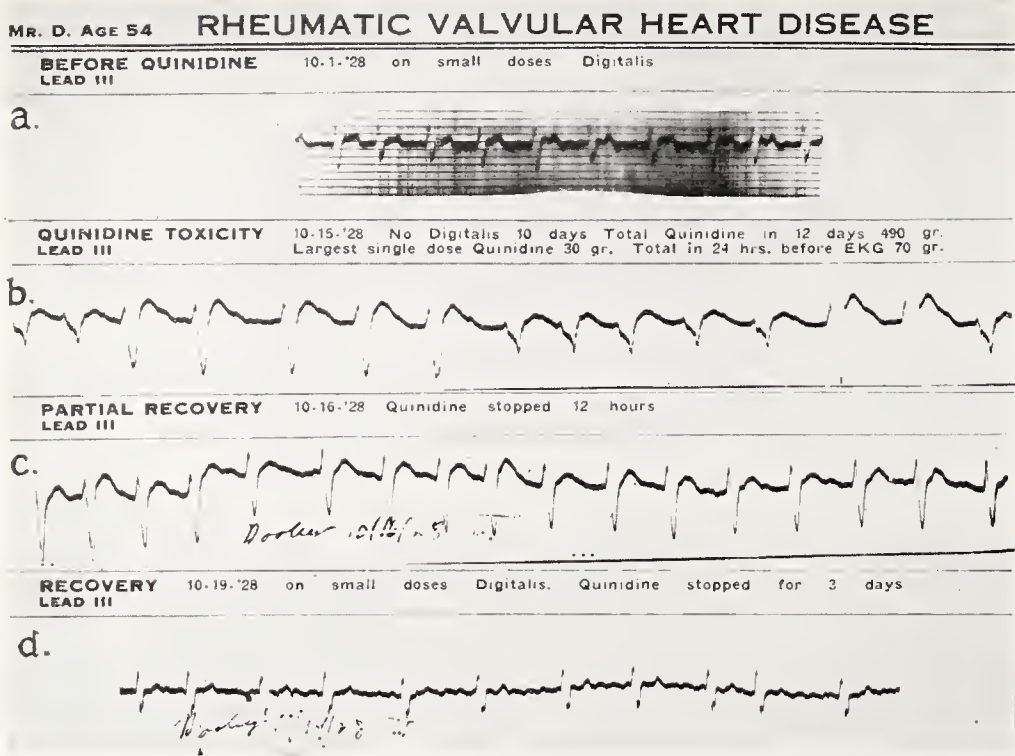
## REPORT OF CASES

CASE 1.—The first is Mr. D., age fifty-four, with rheumatic valvular heart disease and auricular fibrillation of several years standing, first seen October 1, 1928. At that time the first electrocardiogram was taken (Fig. 1, a) showing auricular fibrillation without any intraventricular block or other evidence of delayed conduction. The patient was under small doses of digitalis at this time. He was hospitalized, the digitalis slowly reduced and stopped, and quinidin started and slowly increased, so that for the seven days preceding the next electrocardiogram he had averaged 60 grains daily and had received a total of 490 grains, the highest single dose being 30 grains and highest daily dose 70 grains, both occurring on the day before this second record. The patient did not appear to be doing well; he was quite dizzy, his head ached, he became nauseated and vomited; finally the pulse became perceptibly weaker and somewhat more rapid although not over 120 to 130, and seemingly almost regular. We were worried about his condition so took an electrocardiogram, which showed the following profound changes:

The rate in this record is relatively slow (about 100), and almost although not exactly regular. The most striking change is the profound delay in intraventricular conduction, the Q R S interval having increased from the former .08 seconds to .20 seconds.

No "P" wave can be identified. The complexes are very different in design from those of the tracing taken before the administration of quinidin, resembling a run of left ventricular extrasystoles, thus constituting a run of ventricular tachycardia. Thomas





Electrocardiogram of Case 1

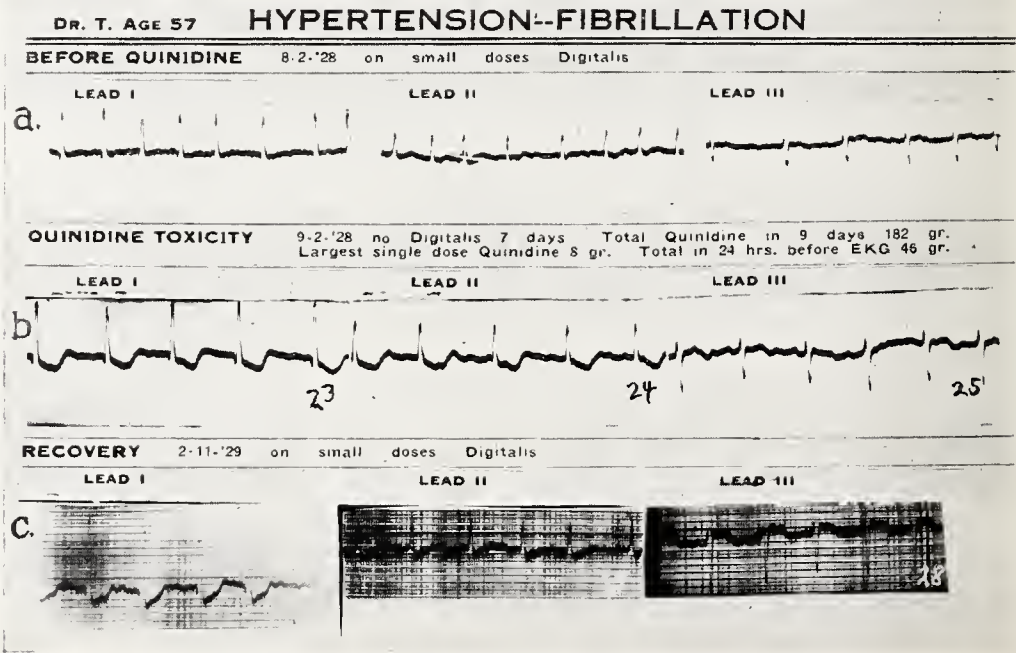
Lewis<sup>2</sup> and Oppenheimer and Mann<sup>3</sup> consider the possibility of the development of ventricular tachycardia in cases of auricular fibrillation treated with quinidin and "consider this development an indication for the immediate discontinuance of the drug." S. A. Levine and M. N. Fulton<sup>4</sup> mention this possibility. R. L. Levy<sup>5</sup> has published electrocardiograms showing ventricular tachycardia occurring in the treatment of auricular fibrillation with quinidin, and Maynard<sup>6</sup> reports a case of ventricular tachycardia due to quinidin poisoning. These are the only references to the subject we have found.

The patient's pulse at this time was so slow and so nearly regular that had we not had this electrocardiographic evidence of poisoning we would doubtless have pushed the drug perhaps to the point of producing ventricular fibrillation. However, with this evidence of toxicity at hand the quinidin was discontinued, the patient placed on digitalis, and twelve hours later the next electrocardiogram (Fig. 1, c) was taken, showing some disappearance of the signs of toxicity; that is, the conduction time had returned to .14 seconds and some of the Q R S complexes had resumed their diphasic form, as in the tracing before the administration of quinidin. The patient continued to improve subjectively and the next record (Fig. 1, d), taken three days later, shows a return to practically the identical condition as before quinidin was started. The patient has been up and about on digitalis in the intervening eight months and is fairly active and a bit better than before his treatment with quinidin.

CASE 2.—The second case shows a similar but less profound toxicosis. Dr. T., age about fifty-seven, with mild hypertension and auricular fibrillation, was first

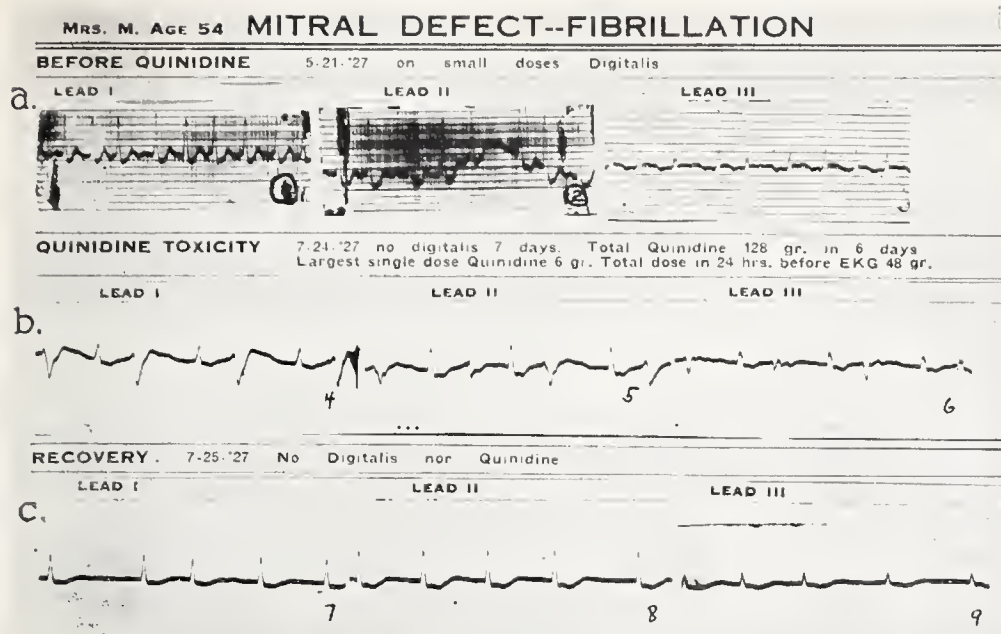
seen August 2, 1928, when the first electrocardiogram (Fig. 2, a) was taken. A total of only 182 grains of quinidin was given in seven days, eight grains every four hours, for the twenty-four hours preceding the next electrocardiogram taken September 2, 1928. On this day the pulse became regular for periods of a few minutes but always at a rapid rate, around 100. The patient had lost his appetite, was slightly nauseated and dizzy, and complained of slight but persistent precordial pain. We were doubtful as to whether to continue with our attempt, so we took an electrocardiogram, which revealed a markedly negative "T" in Leads 1 and 2 (Fig. 2, b), evidence of much damage. We felt that caution was the better part of valor and discontinued the quinidin. The patient was replaced on digitalis and has been carrying on an active practice since. Eight months later the electrocardiogram showed a return to more nearly its previous form, the "T" negativity having nearly disappeared (Fig. 2, c).

CASE 3.—The last case, Mrs. McL., age fifty-four, with a mitral valve defect and auricular fibrillation, illustrates how profound muscle damage may develop with little or no premonitory symptoms. The first electrocardiogram (Fig. 3, a), taken before starting quinidin, shows an essentially normal ventricular complex. Having received during a period of six days a total of 128 grains of quinidin, she complained of a slight headache, but was otherwise not distressed. She was receiving six grains of the drug every three to four hours when at 3 a. m. of the seventh day she received six grains of quinidin and the pulse was charted 100, whereas it had averaged about 80; at 7 a. m. it was charted as "very rapid," the rate not being specified, and instead of the house physician being notified, six grains of quinidin was again given.



Electrocardiogram of Case 2





Electrocardiogram of Case 3

The same thing occurred at 10 a. m. At 10:30 a. m., while talking to her husband, and in no apparent distress, she suddenly fell back unconscious and pulseless. Respiration stopped. The house physician, who luckily was just outside the door, gave artificial respiration and intravenous caffeine, and very slowly natural breathing recommenced and the pulse became obtainable although the patient did not recover consciousness for two hours. While the patient was still unconscious the next electrocardiogram (Fig. 3, b) was taken which shows evidence of marked muscle poisoning. At first glance it appears to be merely coupled rhythm, each supraventricular beat followed by a right ventricular extrasystole, but the decreased amplitude and broadening of the upright complexes and their negative "T"s make it uncertain whether these also are not of ventricular origin, making this record like the first one shown, a case of ventricular tachycardia except that here the complexes are of alternating directions—one up, one down—similar to the bidirectional ventricular tachycardia reported by W. Carter Smith<sup>7</sup> of which this author states there are only eight cases on record and most of which he attributes to overdigitalization. Our first impression of this attack was that the patient had had a stroke, but in two hours she had regained consciousness, and in three hours the use of her voice and limbs, and the next day was apparently as well as ever with no evidence of a cerebral accident. As in the other cases, quinidin was discontinued and the following day the electrocardiogram (Fig. 3, c) showed a return toward normal although the Q R S complexes were still low and the "T"s negative. In the past year the patient has been on digitalis and has felt well as before.

## CONCLUSIONS

We may then conclude by saying that if one is going to treat auricular fibrillation with quinidin, one should carefully push the dose until sinus rhythm is restored or until the above enumerated symptoms of toxicity become alarming. When in doubt, one should take an electrocardiogram and if evidence of heart muscle poisoning is present the drug should be discontinued.

870 Market Street.

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## DISCUSSION

GARNETT CHENEY, M. D. (210 Post Street, San Francisco).—Quinidin is a very valuable cardiac drug. It is insufficiently used not only by the general practitioner, but also by many cardiologists, largely for three reasons. First, the indications for its use, its limitations and its dangers are not as generally known as is necessary in order to obtain the desired bene-

ficial effect. Second, everyone who has heard of quinidin has also heard that it may set loose emboli. But the likelihood of such an untoward effect has been greatly overemphasized. Third, the pharmacologists have shown that the drug has a toxic effect on the myocardium. It has been stated that no ultimate good can come from poisoning the heart. Such a radical stand is unjustified. However, any paper which increases our knowledge of the toxic effects of quinidin deserves commendation. Doctors Newman and Spiro have had a large experience with quinidin and we should all benefit by their study of its toxicity.

In cases of persistent auricular fibrillation which have not responded satisfactorily to digitalization and prolonged bed rest, quinidin should be given a trial. Decompensation is not a contraindication to such therapy, although a fewer number of patients will improve than if no decompensation is present. But, as Paul White has pointed out, some brilliant successes occur in the decompensated group. The matter of dosage is a most important one. Some of our best results occur in patients who require larger doses than those conventionally given. The percentage of cases made regular would be far higher if doses were increased until regular rhythm were established or signs of cinchonism precluded further therapy. Of course some patients cannot take much quinidin while others can tolerate large amounts. I have had patients on 0.8 grams, five times a day, before they became regular. Such patients would be classed as failures if the usual plan of treatment was followed. Most patients are clinically benefited by their regular rhythm.

The risk of emboli has been too greatly exaggerated, which has proved a big handicap for quinidin therapy. Certainly such a risk exists, but large groups of cases have been reported in which no such serious complication has been proved to occur. Emboli occur in cases of heart failure with regular rhythm, and not infrequently in cases of auricular fibrillation untreated or under digitalis therapy. As far as I know, no one has compared their incidence in these conditions with their incidence following quinidin therapy, and no one withholds digitalis for fear of producing emboli.

The toxic effects of quinidin vary from the symptoms of mild cinchonism to possibly death itself from cardiac standstill. Fatalities proved to have been due to the drug itself are extremely rare. Just what clinical and electrocardiographic findings should contraindicate continuance of its use is still a debatable question, and that is why a paper such as this is so



welcome. Cases developing extrasystoles and tachycardia may go into regular rhythm if the drug is pushed further, and such patients may go unhelped if we are too cautious. The internist's position is much like that of the surgeon confronted with an "acute abdomen." Courageous treatment is indicated although one may meet with failure or actually feel that harm has been done. We should know all there is to know about quinidin and then use it.

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JOHN J. SAMPSON, M. D. (490 Post Street, San Francisco).—Doctors Newman and Spiro have admirably defined the indications for the use of quinidin and I believe worthily attempted to dispel much of the awe in which this drug is held. Thus it is practically free of danger in the doses used to prevent attack of paroxysmal auricular tachycardia, in which field it has a high percentage of effectivity. Likewise doses up to two grams per day are shown to be practically free of any serious toxic effect, unless a quinidin idiosyncrasy exists, which of course would be determined by the test dose.

There are two types of toxic phenomena which I have observed other than those mentioned in this paper: First, permanent auricular flutter from which the patient did not recover, and second, ventricular fibrillation, with the recovery of the patient, a case of which was published by Doctors Kerr and Bender.

It is worthy of mention that both quinidin and quinin, especially in paroxysmal auricular fibrillation, may be advantageously administered intravenously.

I have had much success in administering quinidin dihydrochlorid in 10 per cent solution, taking five minutes for the introduction of each cubic centimeter, and stopping if the rhythm became normal, or if a maximum of five cubic centimeters had been injected.

Following the suggestion in this paper, I consider it advisable to hospitalize all patients requiring more than two grams of quinidin a day in order to have them under constant observation and immediately available for an electrocardiogram record.

The clinical pictures drawn by Doctors Newman and Spiro of toxic quinidin poisoning are excellent, and I believe their observation of ventricular ectopic rhythm of special prognostic importance.

## SPHENOIDITIS—ITS DIAGNOSIS AND TREATMENT\*

### REPORT OF CASES

By DEAN E. GODWIN, M. D.  
*Long Beach*

DISCUSSION by J. Frank Friesen, M. D., *Los Angeles*;  
Robert C. Martin, M. D., *San Francisco*.

HISTORICALLY the sphenoid was the last of the nasal accessory sinuses to be recognized as of importance and as susceptible of treatment. As late as the year 1882, Hyrtl wrote that the sphenoid was entirely beyond the range of manual and instrumental attack.<sup>4</sup> In the same year, however, the brilliant work of Zuckerkandl, followed by that of such men as Killian and Hajek,<sup>1</sup> entirely changed this conception, until today the sphenoid should be recognized as possibly the most important of the sinuses demanding treatment.

In the experience of each individual rhinologist the same chronology of recognition is apt to take place. The frontal sinus, because of the in-

sistence of its symptoms, demands and receives attention; the maxillary sinus, being most accessible to diagnosis and to instrumentation, is not apt to be neglected; the ethmoid cells, by the very frequency of their involvement in all acute nasal infections, are not easily overlooked; but the sphenoid sinus, deeply placed, difficult of access, and with symptoms often inconstant, indefinite and bizarre, is often ignored, its infections passed undiagnosed, and its complaining owner classed as a hopeless neurasthenic.

### ANATOMY OF SPHENOID SINUS

The importance of the sphenoid sinus lies in its peculiar anatomic relations, and many of the symptoms, as well as the dangerous complications of its infections, are due to the involvement of the structures with which it is in relation. In fact it is the recognition of symptoms from these structures that often first leads to the diagnosis of sphenoiditis. If the sinus is small, and the walls consequently thick, the only symptoms of infection may be increased secretion. On the other hand, the sinus is often surprisingly large, the walls thin or even in places dehiscant, and if such a sinus becomes infected, and the small ostium highly placed in the anterior wall, gives insufficient drainage, the ease of involvement of adjacent structures is obvious.

The superior wall of the sinus separates it from the meninges above, and on this wall lies the pituitary body, the optic commissure, and the optic canals which may actually project into the sinus. The lateral wall separates the sinus from such structures as the carotid artery, the cavernous sinus, the third, fourth, and sixth cranial nerves, and the first and second divisions of the fifth nerve. If these walls are invaded, the serious complications of meningitis, epidural abscess, or cavernous sinus thrombosis,<sup>7</sup> may first point to an infection of the sphenoid sinus.<sup>1 2</sup> Retrobulbar neuritis and orbital abscess show invasion of the optical canals, while defects of the temporal halves of the visual fields show involvement of the chiasm. Ocular paralyses, combined with other evidences of sphenoid infection, indicate an involvement of the third, fourth, or sixth nerves, probably in the carotid canal.

Sluder<sup>4</sup> has shown that in a large sinus one or all three divisions of the fifth nerve may be paralyzed by cocainizing the interior of the sphenoid cavity. He concludes that infection in the sinus may cause pain in the brow through involvement of the first division, pain in the upper jaw and temple through involvement of the second division, and pain in the lower jaw with stiffness of the muscles of mastication through involvement of the third division of this nerve.

If the sinus extends downward and laterally into the pterygoid process, it comes into intimate relation with the vidian canal, which, like the optic canal, may project like a ridge into the cavity of the sinus. Involvement of the vidian nerve may cause the pain recognized as the sphenopalatin-ganglion syndrome, but is not relieved by cocainizing the ganglion itself. It is

\* Read before the Eye, Ear, Nose, and Throat Section of the California Medical Association at the fifty-eighth annual session at Coronado, May 6-9, 1929.



probable that the pain in the upper parietal region—that in the experience of the writer has seemed most typical of sphenoid sinus infection—is also transmitted through the vidian nerve.

Prolongation of the sinus downward and laterally may also bring it into relation with the eustachian tube, and thus ear symptoms from sphenoid infection are explained.<sup>5</sup> In a recent case under treatment, a young woman complained of constant pain and tinnitus in the right ear of several months' duration, beginning at the time of an acute rhinitis. She had had various forms of treatments, including the extraction of an impacted upper third molar tooth without relief. The drum was normal and there was some obstruction of the eustachian tube, but inflation of the tube gave little relief. Pain and tinnitus both stopped suddenly, however, on the application of cocain and astringents to the orifice and interior of the sphenoid sinus.

In many cases of acute rhinitis the sphenoid sinus is acutely involved, and the chief symptom determining this is pain. The pain in these cases is often indefinite in location. The patient, while apparently acutely uncomfortable, seems at a loss in localizing his symptoms and, when pressed for a reply, points vaguely to various parts of the head. The principal locations of these headaches are in the glabella region, the temples, the vertex, the occiput, the upper parietal regions, and deep in or behind the orbits. There may be tenderness on pressure on the eyeballs. There is often vague discomfort in the ears, differing from that caused by occlusion of the eustachian tubes. Vague, dizzy sensations may be present, accentuated by change of position. In the individual case any one or several of these locations may be complained of, and Hajek emphasizes the fact that in successive attacks the patient always refers his pain to the same area.

In subacute and chronic cases, headaches in the same locations, recurring daily or at irregular intervals, are indicative of deficient or intermittent obstruction in drainage at the sphenoid ostium.

#### SIGNS OF SPHENOIDITIS

The objective symptoms diagnostic of sphenoiditis are secretion and localized redness and swelling. A careful, nonhurried examination is necessary, using a brilliant light in a semidarkened room. The largest throat mirror possible to use, the nasopharyngoscope; the Killian long-bladed nasal speculum; a long, slender, flexible sinus cannula; and an efficient suction apparatus are all of value. The olfactory fissure is shrunk as far as possible by successive applications of cocain and ephedrin, the area being inspected as shrinking progresses. In a surprising number of cases the sphenoid ostium can be probed and cannulized when, at the beginning of the examination, it appears impossible. The finding of a polyp or edematous tissue in the region of the ostium, with or without secretion, is of diagnostic importance, and if borne out by repeated examination the diagnosis of hyperplastic or purulent sphenoiditis is established.

The demonstration of pus exuding from the ostium, or the ability to obtain it from the sinus on irrigation or suction, is conclusive, but is often impossible. Purulent secretion in the olfactory fissure and in the nasopharynx may, of course, originate in the posterior ethmoid cells as well as in the sphenoid sinus, and it is impossible in every case to be assured that the condition is a sphenoiditis, an ethmoiditis, or a combination of the two.

A pharyngitis sicca, an epipharyngitis with glairy tenacious mucus or with persistent crusting, often of a foul nature, are significant conditions, while a lateral pharyngitis with a band of reddened and hypertrophied lymph tissue on the posterolateral wall, particularly if unilateral, has long been considered as diagnostic of sphenoiditis on that side.

The x-ray seems less useful in the diagnosis of sphenoiditis than of infections of other sinuses, though much may be learned by its use regarding the size and extent of the sinus. A lateral view shows this well, but does not distinguish the right from the left sinus. An anteroposterior stereoscopic skiagram shows the two sinuses, but in this, as in the vertical view, the sinus is so far from the film and so overshadowed by other structures that only the grosser variations in density are shown. The Granger technique has been found useful but, in the experience of the writer, seems to present fallacies that detract from its dependability. The Proetz method of instilling lipiodol during intermittent suction gives a beautiful demonstration of the anatomy of the sphenoids.<sup>6,7</sup> However, it shows pathology only by a filling defect in the case of the presence of a polypoid mass in the sinus, or by a prolonged period of time necessary for the sinuses to become empty of lipiodol, and the normal for this has not yet been established.

While none of these methods of x-ray examination is ideal, and while a diagnosis of sphenoiditis should not be made on a skiagram alone, the x-ray should be considered as a valuable adjunct in giving definite facts that, taken together with other information, leads to a diagnosis.

#### TREATMENT OF SPHENOIDITIS

The treatment of sphenoidal infections depends on the type and stage of the disease. In the acute cases the usual measures used to combat the acute rhinitis, together with local treatment about the ostium with cocain, ephedrin and a weak silver solution, are usually all that are necessary to give early relief. In the hyperplastic cases, aëration of the sinuses is essential. This may be accomplished in some cases simply by repeated topical applications, while in others removal of polypoid tissue, partial resection of the middle turbinate body, and enlargement of the ostium are necessary.

In the suppurative cases the desideratum is free drainage, and this may be secured by more or less radical measures. It seems logical to attempt the least radical procedure that gives reasonable promise of attaining this end. The sphenoid



ostium should be enlarged as extensively as possible laterally and downward with a sphenoid punch forcep, removing practically all of the pars nasalis. In the case of a large sinus, it may be possible to remove a part of the floor of the sinus. Occasionally the ostium can be enlarged without sacrificing the middle turbinate body, but usually the posterior portion, or often the whole of this structure, must be removed to gain access to the sphenoid and to give better drainage. If more extensive opening seems necessary, the sinus is entered by way of the posterior ethmoidal cells, and the pars ethmoidalis, as well as the pars nasalis of the anterior wall, is removed by use of the Hajek hook, or the more effective Sluder angular knife.

There is a great tendency for the opening to close, and watchful after-care is necessary, with the occasional cauterization or removal of granulations from the wound edges until epidermatization is complete. Even then, healing may be a prolonged process, and irrigations, the use of suction, and the applications of weak silver solutions to the interior of the sinus, may be necessary for some time until the mucous membrane lining approaches the normal; but in no branch of intranasal work are patience and persistence more rewarded than in the treatment of these cases.

#### REPORT OF CASES

Two case histories are briefly summarized.

CASE 1.—Mrs. O. E. B., age thirty-three, was seen in August 1927, with the complaint of frequent nasal colds and constant severe diffuse head pains, but particularly of a frequently recurring agonizing pain in the upper right parietal region. The findings were essentially negative except for congestion, edema, and slight secretion in both olfactory fissures. The usual stereoscopic x-rays were negative, but the view taken by the Granger technique was reported as suspicious of involvement of the sphenoids. The patient was operated, portions of both middle turbinates being removed and both sphenoids opened widely. There was immediate relief from the typical pains complained of, and these have remained absent since except on several occasions during the early post-operative treatment, when the sphenoid openings became occluded by granulations or swelling. On one occasion the patient complained of a return of the typical severe pain in the upper right parietal region. The right sphenoid opening was found to be occluded by granulations, and on passing a probe through them into the sinus there was instantaneous relief from the pain. The cessation of pain was so prompt and definite as to be remarkable and, in the absence of secretion in the sinus at that time, could only be explained by a so-called vacuum sinus condition. Following further treatments, the wound edges healed and the sphenoid sinuses remained open, and though the patient has been treated for several subsequent attacks of acute rhinitis, she has remained free from the typical sphenoidal pains.

CASE 2.—Mrs. S. B., age forty-three, was seen June 5, 1928. She had had a greenish yellow postnasal discharge for years. Several months previously she had had a submucous resection of the septum with partial turbinectomy on account of impaired hearing. Following this she began to have severe pains in the upper left parietal and occipital regions. These occurred in attacks lasting from one to several days, with short intermissions, and were so severe that the patient feared insanity and brain tumor. She had lost weight and there was a variable tachycardia up to 140. Re-

peated thorough physical and neurological examinations had been negative except for the nasal findings, and pulmonary tuberculosis and thyroid involvement had been apparently ruled out. X-rays showed an exceptionally large sphenoid sinus on the left side and, when injected by the Proetz method, this was seen to extend far down into the pterygoid process. Irrigation of this sinus produced a thick mucopus and gave relief for several days from the parietal and occipital pain. A large window opening was made in the anterior wall. The mucous membrane lining, viewed directly, appeared normal, but the nasopharyngoscope introduced into the sinus showed swollen and edematous membrane far down in the lower portion. The condition has been stubborn and the patient is still under treatment. There has been great improvement, but with several relapses. At times suction has proved effective in removing thick secretion from the sinus after irrigation has been negative, but always the removal has been followed by relief of symptoms, and the involvement of the Vidian nerve seems to have been proved.

#### CONCLUSIONS

1. Infections of the sphenoid sinus rank high among conditions demanding intranasal treatment.
2. Diagnosis is made: (a) by finding of abnormal secretion or visible pathological changes about or in the cavity, but principally (b) by the recognition of the symptoms of involvement of adjacent structures.
3. Treatment by medical or surgical means, while more difficult than that of other sinuses produces marked relief of symptoms often unrecognized as related to this sinus.

910 Security Building.

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#### DISCUSSION

J. FRANK FRIESEN, M. D. (1208 Roosevelt Building, Los Angeles).—The sphenoid sinus as a center of infection has not been given sufficient emphasis, and the subject is well worthy of our attention.

When we consider the sphenoid, located posteriorly, almost completely surrounded by vital structures, we can readily see why a sphenoiditis will cause ocular symptoms, nerve pains, and intracranial infections.

In the diagnosis of a sinus disease, pain is more or less a dominant symptom. In a sphenoiditis there are two different types of pain, and these two types each present a different picture. A dull, heavy pain in the back of the head, produced by pressure from secretion and the interference of drainage, which Doctor Godwin has aptly described. The other picture is a pain along the branches of the vidian nerve referred to the face, teeth, neck, or shoulder which may come in the course of a mild, acute or chronic posterior sinus infection. The infection or coryza in these cells may be so slight that the patient is not aware of it, and yet have the headache and referred pains that come from the maxillary and vidian nerves. This syndrome is very similar to that of a sphenopalatine



neurosis, and often explains the failures in the treatment of the sphenopalatine ganglion. These symptoms promptly disappear if the treatment is directed to the posterior sinuses.

This is best accomplished by shrinking the posterior nasal fossae and applying an argyrol tampon. I have also had good results in using the one per cent aqueous solution of ephedrin by the suction displacement method suggested by Proetz.

✱

ROBERT C. MARTIN, M.D. (384 Post Street, San Francisco).—Disease of the sphenoid alone is probably very rare because of the intimate relationship of the posterior ethmoids. We can recall but two cases of involvement of this sinus which were not accompanied by demonstrable posterior ethmoiditis. In these the upper parietal pain described by Doctor Godwin was marked, and was associated with mental confusion. These symptoms cleared with shrinking and irrigation. It is our impression that sphenoiditis is perhaps not so frequent as stated.

The chronic sphenoid-ethmoidal infections are subject to frequent relapses, whether the treatment be conservative or radical. A thorough medical examination and general therapy are indicated in order to eliminate allergic or glandular conditions which, undetected, will defeat the purpose of local therapy.

The relationship of sphenoiditis or sphenoid-ethmoiditis to retrobulbar neuritis should be emphasized since aëration in these cases is often followed by striking improvement. The difficulty in these cases lies in determining the presence or absence of an early multiple sclerosis.

✱

DOCTOR GODWIN (Closing).—In closing, I wish to emphasize the importance of infections of the sphenoid sinus. It is large; it is deeply placed; it has poor drainage, and it is in intimate relation with important structures. It is reasonable to believe that it is at least as frequently infected as any other sinus. If these facts are borne in mind, I believe that many vague symptoms will be explained, and many more cases will be diagnosed.

## INTRACAPSULAR CATARACT OPERATIONS\*

By LLOYD MILLS, M.D.

Los Angeles

DISCUSSION by Raymond J. Nutting, M.D., Oakland; Roderic O'Connor, M.D., Oakland; William A. Boyce, M.D., Los Angeles.

A NEW spirit is abroad in cataract surgery, as a result of the patient study of the operative methods and results of the last four generations of ophthalmic surgeons. The present generation recognizes that there is no single operative method of removing cataract which is uniformly safe and certain of beneficent results. Every surgeon of experience, therefore, has several methods of cataract delivery, as well as a well-grounded knowledge of their indications. Not even a Barraquer, probably the outstanding ophthalmic surgeon of this decade, attempts to deliver all lenses in their capsules, and he has been the first to go on record as to the limitations of his own method (Ignacio Barraquer, September 1922, *Archiv. Ophthalm.*).

The reason why certain operative fashions in medicine have been discredited is nowhere more apparent than in the case of the generally abandoned Smith-Indian expression of cataract. This particular fiasco led to almost universal interest

in delivery of the cataractous lens within its capsule and a number of methods of intracapsular delivery in vogue owe their position more or less definitely to this stimulus. The unyielding opposition of a number of men to all intracapsular methods, an active opposition which will last as long as they live, likewise is based upon the stream of tragedies which, in their experience or observation, interspersed the brilliant successes of this one method. Fortunately for the progress of cataract surgery these opponents are much in the minority and their retarding influence is but transitory.

### THE DEMANDS OF INTRACAPSULAR TECHNIQUE

There has been much criticism in the past that the men who have set themselves up as outstanding cataract surgeons, generally championing some especial method, have given the impression that only those possessed of some divine spark could ever perform the given method creditably. I have had the privilege of seeing and reviewing the work of many eye surgeons of all grades of capacity and experience, and I am convinced that the chief differences which exist between them are accounted for by differences in surgical opportunity more than by any other single factor. The expert in any medium must subject himself to a prodigious amount of training before the fine frenzy of the artist is attained. Great ophthalmic surgeons are no more common than the great in other fields and, as in the case of Barraquer, they probably represent the conjunction of a distinguished heredity, early and intensive specialization, real surgical genius and flawless dexterity. Not every man has native surgical instinct or can be made into a surgeon, but too often, when the native ability is present, both opportunity and material are lacking.

It is obvious that the delivery of a lens within its unbroken capsule, and especially if this delivery is to be made by the ideal way of an intact pupil, makes the greatest possible demands upon the surgeon's judgment as well as upon his technical ability. All cases must be selected. The incisions must be larger and placed well toward the sclera, the pressures must be nicely regulated in the expression methods, the traction on the capsule in the forceps-traction method requires a masterful gentleness reached only by training, while the most technical procedure of all, the vacuum extraction of Barraquer, demands a delicacy of execution which must be perfect in its smallest details if consecutive successes are to be obtained. Is it any wonder, then, that intelligent training is asked of men who would engage in these more highly specialized surgical measures? A common belief exists among men who use the combined extraction only that the statements of the difficulties met in doing these more complicated operations are made in the selfish hope of deterring their more general adoption. Such belief is unworthy and has no basis in fact. The truth is that the loss of an eye represents to the eye surgeon what the loss of a life does to the general surgeon. Consequently the exponent of any method is careful that he be not made in-

\* Read before the Eye, Ear, Nose, and Throat Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.



directly responsible for measures which cannot fail to be hazardous in unpracticed hands, or when entered upon without a fitting sense of their risks.

These risks, in the expression and forceps-traction operations, and to a much less extent in facoerisis, are those of loss of vitreous, occasionally in considerable amounts, and of rupture of the capsule before delivery of the lens. The incidence of these complications and their gravity usually have a direct relation to the ability and experience of the operator.

#### EXPRESSION OPERATIONS

The expression methods most used today are modifications of the Smith-Indian operation with incisions embracing half, or more, of the corneal circumference, usually without conjunctival flap, the zonule being broken by the pressure of a hook either on the cornea, or, as in the use of the Schwartz hook, on the sclera.

Colonel Smith, dissatisfied with the reception of his earlier operation, returned to the Punjab in 1925-26 and developed an intracapsular method which he modestly states will make Daviel's operation "but a tradition of the fathers," and which will place Barraquer's vacuum spoon on a shelf in the museum with all the forms of Kalt forceps, "to be inspected as objects of historical interest" (Lieutenant-Colonel Henry Smith. *The Treatment of Cataract*. London, 1928). This revolution is to be effected by tumbling the lens between the combined pressure of a lens hook and a spatula. The corneal wound, including at least half of the circumference, is kept closed by the pressure of a broad spatula, while the zonule is being ruptured by pressure of a lens hook applied so far below the cornea that the sclera is indented behind the lens. The lower edge of the lens thus is forced upward and forward to the wound without loss of vitreous, a maneuver previously limited to soft and mainly Morgagnian cataracts. Colonel Smith's claims for his disastrous earlier method were no less extravagant and the situation would appear to have justified the scathing remarks of one reviewer that, "The inexperienced ophthalmic surgeon will read and believe it and, on attempting to practice the maxims, will wallow in vitreous until experience has ripened him." I have had no practice with this method, but have used the Schwartz hook successfully in several cases, using scleral pressure, and it is within the bounds of possibility that the combination of this flat hook with the counterpressure by spatula over the wound might simplify this particular operation. The forces in any expression operation must be so accurately balanced that only one with experience should attempt it and, unless this new method clearly proves to have outstanding merit, with a minimum of complication, I am of the opinion, from an experience of about seventy-five such operations, that intracapsular expression methods *per se* should never be used. In this, of all intracapsular operations, when vitreous is lost, it often is lost in serious amounts; and there is often marked deformity of the whole anterior segment with

great astigmatism, an updrawing of the pupil and dislocation of the vitreous. The occasional brilliant results never justify the high incidence of these complications. Racial factors may modify the ease of rupture of suspensory ligaments but if such factors do exist they are far more likely to have relation to the greater development of strength in the zonules of the hyperopes among the more educated peoples and consequently to their greater resistance to rupture. This same factor may influence at times the difficulty of rupture of the zonule in the Barraquer method in hyperopes of more than small degree.

#### EXTRACTION OPERATIONS

The capsule-traction methods of Knapp, Torok, and Stanculeanu are similar in method and, as generally used, consist in grasping the anterior capsule of the lens with some form of nontearing capsule forceps in cases where study gives the impression that the capsule is likely to be more resistant to traction than the zonule. Traction from side to side, up and down and in circular forms breaks the zonule and expression is completed by pressure through the cornea by a hook, the lens tumbling, as its upside-down reversal of position is called. This method is successful in about 50 to 60 per cent of the selected cases upon which it is tried and has a loss of vitreous, usually of no significant amount in from 2 to 18 per cent, depending upon the operator's judgment in the selection of cases, upon his experience, upon the completeness of the anesthesia, and upon whether he sutures his incision or leaves them to the mercy of all the physicomental stresses to which early convalescence is subjected. Recent improvements in technique are: the full closure of wounds, and the perfect absence of pain or of squeezing during operation which are assured by facial nerve blocking and direct intra-ocular anesthesia. There is every reason to believe that these particular methods will reduce the loss of vitreous to an incidence which will equal or better that of the combined method. Logically the only cases of loss of vitreous by this method, in expert hands, should be those where there are adhesions between the lens and its bed in the patellar fossa or hyaloid defects, and these are believed to be rare.

The most superior form of intracapsular cataract operation, in my experience, is the vacuum extraction. Adequate technical training and a knowledge of the limitations of the method are essential. The same types of cases are excluded as in the selection of material for other intracapsular methods: Increased intra-ocular tension, the history of old retinal hemorrhage, very sclerosed lenses with friable capsules, senility or other mental intractability, are reasons for not using this method. Barraquer states: "One should not intervene in subjects under forty, because in them the zonule is very resistant, nor in a complicated cataract or in one occurring in myopia, in a subluxated lens, in traumatic cataract, or in one ripened artificially by means of a preparatory iridectomy." Of course, there are exceptions to these exceptions. The method is too widely known



and used to require description, but its main element is gentleness from the moment of fixation of the globe to the point where the lens is extracted quietly and without the least pressure upon the patellar fossa. Pressure anywhere is avoided at all costs. The correct performance of this operation gives the most beautiful immediate result in all cataract surgery. Nobody has yet published results equalling those of Barraquer, but men in many places are finding a degree of success with this method, modified to their individual needs, such as they have never before found in cataract surgery.

After mastering the technique, both with Barraquer and at home, I gave up the use of this method several years ago because I was not satisfied with the fundamental principles of the treatment of cataract wounds in general. It appeared to me that cataract surgery was being done without regard to those basic rules of surgery which require that "all presumably clean wounds shall be fully closed (by suture) without drainage in order to prevent infection of the wound from without, and that wounds made and closed in more than one plane afford less chance of infection, are surer protection against hernia of the structures which they enclose, and are stouter." Full suture of a complete conjunctival flap by long and exacting trial in four hundred and sixty-three cases, associated latterly with a routine form of complete intra-ocular anesthesia and hemostasis detailed elsewhere,<sup>1</sup> proved that this assumption was correct. Iris prolapse, delayed healing, painful wounds, secondary infection, glaucoma and high astigmatism were reduced greatly, or wholly eliminated, and the incidence of secondary cataract slightly reduced. The full coverage of the wound by a conjunctival flap and its full suture have brought the extracapsular extraction of cataract, in its combined, simple and peripheral iridectomy forms, to a point of safety and of visual excellence which compares most favorably with those obtained by any intracapsular method save that of Barraquer. The future history of complications following extracapsular cataract extraction after the generalization of this method of complete protection of the wound, in the main should be the history of after-cataract, for only in this matter of after-cataract should any form of intracapsular extraction finally prove superior to this modification of the combined method in equally experienced hands.

#### SUMMARY

1. No method of removing cataract is uniformly safe and certain of success, and because of this, most experienced ophthalmic surgeons now deliver lenses in or out of their capsules and with or without iridectomies, according to the indications of each case.

2. Successful intracapsular surgery requires especial knowledge of the risks and contraindications and a mastery of the more complicated technique.

3. All forms of cataract surgery in which the wound is left unsutured are subject to the disasters of delayed healing, hernia of the ocular

contents, infection and secondary glaucoma, as well as to increased corneal astigmatism.

4. Full closure of the incision by full suture of a conjunctival flap in a different plane prevents or reduces these disasters to a minimum and lessens postoperative astigmatism in all forms of cataract.

5. The correct extracapsular operation, in which the full flap and suture are employed, should rival the intracapsular operation in all ways save the complication of after-cataracts, peculiar to the extracapsular method, whose incidence largely is a matter of technique and experience.

609 South Grand Avenue.

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#### DISCUSSION

RAYMOND J. NUTTING, M. D. (1904 Franklin Street, Oakland).—Doctor Mills' article on intracapsular cataract operations is most timely and interesting. I certainly agree with him that no method of removing cataracts is uniformly safe and certain of success, but I feel that the old classical extracapsular operation is safer in both skilled and unskilled hands. I can only say that if I had to have a cataract removed I would go to a man who would first do a preliminary iridectomy, followed later by the old operation.

Personally I feel that the lids should be completely paralyzed and then that a complete anesthetic should be given before making an incision. Lately I have been using the undetached conjunctival flap and so far have no reason to give it up, but on the contrary my results have been better and the patients are able to leave the hospital from four to seven days earlier.

After one sad experience with the speculum, I now use double-armed sutures in the upper and lower lid, and at the finish these same sutures can be used to keep the lids closed under the patch, especially after using complete facial nerve paralysis.

I certainly agree with Doctor Mills that in private practice the correct extracapsular operation should rival the intracapsular operation.

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RODERIC O'CONNOR, M. D. (1904 Franklin Street, Oakland).—All intracapsular operations remove the diaphragm that serves to protect the vitreous from infection as well as loss. This diaphragm is made up of the posterior lens capsule and the zonular ligament and its removal seems poor surgery to those of us who have the "unyielding opposition" he mentions. Our numbers are possibly a few more than the minus quantity he implies.

Intracapsular operators are fond of stating that a *small* loss of vitreous is of no importance. It is well established that late retinal detachments occur more frequently in cases complicated by such loss. Another important point is that any loss is more likely to become excessive than if it had not started. The loss cannot start unless the above mentioned diaphragm is ruptured. There can be no denial of the fact that vitreous loss is much less frequent in the capsulotomy operation. Doctor Mills hopes that he has developed a method that will show as good a record.

Personal experience with the "stream of tragedies" he mentions has not been necessary to persuade me that all such methods are not only *needless* but that their *performance* is *inexcusable*. This because no such operation, even in the hands of the most divinely endowed operator, has yet produced average results equal to those by the capsulotomy method in the hands of capable and careful operators.

His whole argument is negated in his fifth conclusion, for there he admits that prevention of the dissection of secondary membranes is the only reason



for the intracapsular procedure. The "unyielding opposition" sees no sense in subjecting all cases to a difficult and risky operation merely to avoid a simple one in *some*.

I agree with him that a lens should be lifted out, not expressed. My way of doing this is by using a very flexible shell spatula which permits a visual, as well as a tactile, judgment of pressure.

Practically none is required to tilt the upper edge of the lens forward after a large piece of the capsule has been removed by forceps. At this point a Fischer needle is used to lift or tease it out from under an undetached conjunctival flap. Since lid paralysis has been made routine I have not had one vitreous loss.

The cataract incision is important enough to call for the best use of one's master hand. The percentage is diminishing of those who, in a sheeplike way, have tried to imitate the so-called masters in always standing at the patient's head, making the incision in the right eye with the right hand and in the left eye with the left hand.

Frequently, in cataract discussions, is heard a statement that preliminary iridectomy is not needed if the patient has two good eyes. Such a statement should be considered equal to a confession of unfitness. One who will not use all the safety precautions all the time is not worthy of the responsibility.

Doctor Mills lists many types of patients not suitable for the intracapsular operation. So, of course, in these the relatively safe old capsulotomy is the operation of choice.

His scheme of five sutures does not appeal. No one in any line of surgery can hope to attain 100 per cent freedom from stitch infection. Placement of stitches calls for much time and manipulation. The shorter an operation the less chance for misbehavior, which is the usual cause of mishaps when the operator is manually skillful. If tight closure is necessary, why are we taught to open the eye in cases of nonunion and permit the tarsal cartilage to give its normal gentle support to the wound? Only in the past month, I had such an occurrence in a case of nonunion, following extraction in a glaucomatous eye, the patient being also diabetic. The wound promptly united after removal of dressings. If he has markedly reduced, by sutures, the "incidence of iris prolapse, delayed healing, painful wounds, secondary infections, glaucoma, and high astigmatism," are all those troubles necessary? His enthusiasm has given the discussor a wonderful chance to comment.

I am glad he dismisses the Smith operation as a fiasco.

In regard to the Barraquer operation, its success depends upon the unfailing action of an electric vacuum pump. Electrical apparatus is notoriously temperamental (witness automobile ignition systems). I would prefer to have the responsibility for failure rest with me after I had started—at least as far as cataract surgery is concerned.

The Knapp type of operation appeals to me more than any because in the 50 per cent of cases where it fails, the operation can be completed by ordinary capsulotomy technique. Doctor Knapp, who is one of our most expert operators, has just reported his third series of one hundred operations. He lists the following mishaps: vitreous loss in seven, iritis in eight, reopening of wound in ten, expulsive hemorrhage in two, and late retinal detachment in two. I would hate to look forward to such a gloomy prospect in my cataract work.

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WILLIAM A. BOYCE, M.D. (1210 Roosevelt Building, Los Angeles).—I want to compliment Doctor Mills upon his excellent paper. I agree with him that the intracapsular is the ideal cataract operation and can be successfully done in selected cases by those who are doing sufficient work to have mastered, as he expresses it, that masterful gentleness, reached only by training.

Someone has said that the truly great surgeon is the one who knows when not to operate. The truly great eye surgeon knows when not to attempt an

intracapsular operation. If the intracapsular operation is determined upon, a method should be selected that will insure the least amount of traumatism and possibility of vitreous loss. I do not believe that any pressure should ever be made upon the eye in the intracapsular operation. In my opinion, the safest method is with some form of dull capsule forceps, as advocated by Knapp. If the zonule breaks, the intracapsular operation is done. If the capsule ruptures an extracapsular operation is done.

I do the extracapsular operation except in selected cases, because I think the danger is less. Using a capsule forceps, taking off a large bite of capsule with a thorough anterior chamber irrigation and keeping up atropin until the eye is white, prevents the formation of an after-cataract, except in a small percentage of cases.

I also agree with Doctor Mills, regarding the stitch. I use it in all of my cases, and the advantage, I find, is that when the lens is delivered the suture can be pulled taut and held while the irrigation and replacement of the iris is done. The toilet can be made with more deliberation, and elderly patients can be gotten out of bed sooner.

✱

DOCTOR MILLS (Closing).—Doctor O'Connor misunderstands me merely for the joy of argument. He knows that I have no quarrel with anybody who closes cataract wounds after operation, regardless of the form of intra-ocular procedure. My campaign, in and out of the United States, has been to the end that eye surgeons should recognize that eye wounds differ in no sense from other wounds save that their risk of postoperative infection is greater than in the usual clean surgical wound, and that the mechanics of ocular muscle action tend to produce gaping in the unprotected wound. I have no brief for any particular method of extraction of cataract in or without its capsule, believing that there are several excellent methods of meeting the indications in particular cases and that many surgeons, including myself, are using these methods in safety.

There is no longer any justification for the surgeon who presents a series of one hundred consecutive cataract cases performed by a single method. Somewhere he has been unjust to somebody who could have been served better by other means.

The irreducible percentage of complications which followed the combined extraction without flap or suture, even in master hands, has led to two general protective measures; undetached or pocket flaps of conjunctiva and full conjunctival flaps, partly or wholly sutured. Doctor O'Connor's own excellent results are a tribute to the former, but he is not clear when he prefaces the statement that he has neither poor healing of wounds nor other complications by the sketch of a case of nonunion. I have not had a single case of delayed healing or reopening of the wound in over five hundred cases of all kinds, including diabetes and glaucoma, in which suture was used.

"Stitch abscess," as seen in skin wounds, does not occur in the eyes, probably from better blood supply and the cleansing effect of drops and antiseptic eye salves. How often does Doctor O'Connor get "stitch abscess" after work on the ocular muscles?

My particular quarrel is with that group of men who still make a limbic incision, a breathless iridectomy, capsulectomy and expression, all within a minute, and who leave the unprotected wound open to those savage mercies of mischance which follow this very method in definite and irreducible percentages. The greatest eye surgeons of the recent past could not reduce these percentages of real disaster and too frequent blindness below definite levels. The average eye surgeon who has made present-day progress has reduced these levels almost to zero. How, then, do these others dare maintain their attitude in the face of the widely known and effective measures which positively will exclude such tragedies from their work, and continue to ascribe their failures to imperfect sterilization of instruments, faulty preparation, and similar self-delusions!



The results of the Knapp operation referred to by Doctor O'Connor are incomprehensible to me, for with the use of the flap and suture, wounds do not reopen, expulsive hemorrhage and detachment of the retina are practically unknown, and iritis, other than that due to lens protein reaction and the rare endogenous infection, does not occur. These facts will be confirmed by every man who sutures his wounds. Such results seem inexcusably bad, as they are due mainly to failure to close the incision correctly. Several years ago somebody gave an involved mathematical explanation of the impossibility of delivering a lens in its capsule if a conjunctival flap was used. Barraquer's outstanding work, confirmed by many lesser surgeons, squarely proved the absurdity of this theory. If operators by any method find difficulty in fashioning their flaps at the time of incision, they may be preformed at will. My personal opinion and practice are that every form of operative work inside the eyeball should be done under a flap which should be fully closed by suture after such work. About 90 per cent of my cataract work is done with capsulotomy, expression, and irrigation where needed. About two-thirds of these cases have peripheral iridectomies. A very few are simple extractions. The balance have regular iridectomies which I use only where there are mechanical obstacles to delivery such as large lenses and small eyes. The rest of my cataract work is intracapsular in several forms. Because of the use of flap and suture, the disasters which all cataract operations have in common from unclosed wounds have been reduced equally in this form of surgery.

## DISEASES OF HUMAN HYPERSENSITIVENESS\*

### THE IMPORTANCE OF PROPER DOSAGE IN THEIR SPECIFIC TREATMENT

By EDWARD MATZGER, M. D.  
San Francisco

DISCUSSION by George Piness, M. D., Los Angeles;  
Albert H. Rowe, M. D., Oakland.

THERE were two deaths in California during the year 1928 which were attributed supposedly to the "specific treatment" of hay fever. From the meager case reports obtainable such results might be accounted for by the use of extracts that were far too concentrated for the treatment of these undoubtedly markedly hypersensitive individuals.

A better understanding of some of the fundamental facts will serve us in our effort to avoid untoward reactions. Clinically the severity of reactions seems to bear an almost unbelievable relationship to the amount of excitant. The excitant may be present in minute quantities, yet the reaction to it in hypersensitive individuals may manifest itself by extremely severe symptoms. It would seem as though the excitant acts simply as a trigger in setting off a reaction. Keeping this clinical fact in mind, we must proceed with extreme care in testing as well as treating hypersensitive individuals.

It is a fact that a large dose of a specific substance in a hay fever patient may produce both urticaria and an attack of the disease. While this will confirm the specificity of our therapy, it is,

however, attended by many obvious disadvantages. A still larger dose in the same individual may lead to the precipitation of this patient's first attack of asthma.<sup>1 2</sup> This is to be rigidly guarded against since the asthma so induced may persist.

There are very well-established guides at our disposal, the observance of which permits one to obviate these disagreeable results as well as procure data for outlining a safe ascending dosage.

The enormous amount of literature sent by commercial houses, in the hope that physicians will buy their pollen and other treatment extracts, places almost its entire emphasis on a "specific diagnosis." There is a fine disregard of dosage, yet this factor alone will determine the difference between successful and unsuccessful treatment. Underdosage of a specific agent will lead to incomplete results. Overdosage, on the other hand, will lead to an aggravation of the symptoms we are attempting to relieve or to a very severe reaction and very rarely a fatality.

Since it is the principal purpose of this paper to emphasize the importance of proper dosage in the specific treatment of the diseases of human hypersensitiveness, the several cardinal points that must be observed in order to arrive at a specific diagnosis will only be outlined.

### CARDINAL POINTS IN DIAGNOSIS

Assuming a pollen sensitive patient with asthma to be skin-sensitive to mugwort pollen, brome grass pollen, and black walnut pollen, and upon consulting a chronology chart of pollination and finding that the patient's symptoms coincide with the mugwort pollination season only, one determines to use only the mugwort pollen extract in treatment. This furnishes a complete clinical picture, skin sensitiveness coinciding with clinical exposure. Only those positive skin tests which check directly with the clinical history are interpreted as important and the other positive skin tests are considered as potential possibilities in causing symptoms.

### TECHNIQUE

The ordinary procedure is well known to you. A set of skin-test extracts is used for diagnosis and the extract giving the most strongly positive reactions is usually purchased. This treatment extract is as a rule different in its activity from the diagnostic extract. It may have been made from a different gathering of material, kept under more favorable conditions, or prepared in different concentration. It is, therefore, essential that the patient be retested with the solution to be used for active immunization.

It has been observed that general reactions occur from tests. These are more frequent after using the intradermal method than when the scratch method is used because the reaction from the intradermal test is far more intense than from the scratch test. This apparent objection becomes an advantage upon realizing that the very intensiveness of the intradermal method reduces the number of previously considered insensitive individuals. The danger of general reactions can be avoided by testing with more dilute solutions.

\* Read before the General Medicine Section of the California Medical Association at the Fifty-Eighth Annual Session, at Coronado, May 6-9, 1929.



This dilution can be extended to 1-10, 1-100 and 1-1000 with normal salt solution. A test can be made with the weakest of these dilutions, and if negative, the next stronger dilution can be used after a few minutes.

The response to varying dilutions gives the key to the individual degree of sensitiveness of the patient. Dr. R. A. Cooke<sup>3</sup> clearly emphasizes this important advantage in his use of the intradermal method. Dr. I. Chandler Walker<sup>4</sup> makes use of this same principle in adapting it to the scratch technique.

#### KEY TO PROPER DOSAGE

This evaluation of the patient's individual degree of sensitiveness furnishes the key to proper dosage. It is generally agreed that the initial therapeutic dose should be one-tenth of a cubic centimeter of the specific agent of the dilution giving a minimum skin reaction. This dose is to be increased, not according to a printed schedule outline, but in the amount that each individual patient can tolerate. It is important that the treatment injections be given just under the skin so that the injected solution raise a lump. This precaution has at least two distinct advantages: first, the avoidance of puncturing a venule, whereby the extract would be given intravenously; second, the reaction to the extract is directly under inspection.

A violent reaction can be combated by the application of a tourniquet about the arm above the site of injection and by the administration of liberal doses of epinephrin above and below the tourniquet. The use of strophanthin, intravenously, is sometimes indicated. So much for the safety factor in avoiding severe reactions with the first injection, but there are other dangers.

When the next higher concentration of the treatment extract is used, dilutions should be made and skin-testing done to confirm the concentration as indicated by the label. Dilutions for this confirmatory test may be made in the hypodermic barrel. As the maximum dose is approached the dangers of violent reactions again occur. These reactions may be guarded against if the following general fact is kept in mind. Before maximum doses are reached, therapeutic benefits are already obvious for specificity in treatment is uniformly characterized by the striking fact that if an agent be truly specific, whether pollen extract, dander extract, or bacterial vaccine, a beneficial influence will be experienced by the patient immediately. These effects are always temporary and, therefore, repeated doses are necessary. Should benefit not become objectively evident in the course of a few weeks, one suspects that the agent used is not the proper one and further increase of dosage is both futile and dangerous.

There is, unfortunately no satisfactory method of standardizing the active principle nor is it even known definitely what the specific agents are. We must therefore view very guardedly all convenient arbitrary standards, such as pollen units,

dilutions, nitrogen content, remembering that the patient's individual reaction must be the only indicator.

#### GUIDE TO DOSAGE

The answers to two very simple questions serve as guides: "How do you feel?" This will be answered: "Worse," "Same," or "Feeling great." Hypersensitive people know no happy mediums. This question is to be followed by, "Was your arm sore?" If the answer to this question be "Yes," then an inquiry is made as to the duration of the soreness.

If the patient has a sore arm and is feeling worse, it is to be interpreted as the sequelae of overdosage. Do not then increase the next dose. If the arm is sore and the patient is unimproved, repeat the dose. If the patient has a sore arm and is "feeling good," the chances are that this patient's optimum dose has been reached. As the patient becomes symptom free the interval between treatments rather than the dose is increased. If, at any time, increase in dosage leads to a return of symptoms, drop back to the preceding dose to obtain the maximum results. Should the patient tell you that his arm is not sore and that he feels worse, he undoubtedly is underdosed. Increase then the next dose and increase the frequency of the treatments. Contributing factors to failure are, constant nasal pathology or food sensitiveness.

It is apparent that proper dosage can usually be determined when a single antigen is used though this problem becomes more complicated as attempts are made to relieve multiple sensitiveness. Each antigen to be used must be separately tested for and individually dosed.

#### CONCLUSIONS

The specific treatment of human hypersensitiveness results in spectacular relief when the correct diagnosis is attained and the correct dosage used.

Since antigens are potent for good when used properly, it must be thoroughly understood they are likewise potent to do harm when used improperly. It is necessary for one who uses these specific agents to realize their activity and danger.

909 Hyde Street.

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#### DISCUSSION

GEORGE PINESS, M. D. (1136 West Sixth Street, Los Angeles).—Doctor Matzger's paper is a very timely one and should be of particular interest at this time when hay fever is so prevalent, and especially to the general practitioner who may occasionally treat hay fever. It is true that several deaths have been attributed to overdosage of pollen antigen, but I do not think that we should become unduly alarmed because reports of such reactions are rare, and, as suggested by



Doctor Matzger, if one will be careful in determining the initial dose when treatment is commenced these may be avoided. Also if one is acquainted with the reactions that may occur from treatment with pollen antigen he can usually combat them very readily with the administration of adrenalin chlorid in doses 0.5 cubic centimeters to 1 cubic centimeter. It has never been necessary in our own practice to use strophanthin. Another point is that these reactions of a serious nature may be avoided by insisting that the patient remain in the office for at least twenty minutes after the injection of the pollen antigen. Should any reactions occur of a severe nature they will occur within that period of time and, as mentioned above, can be combated by the means suggested. The commonest reactions that occur following the treatment of hay fever with pollen antigen are those of a marked redness and swelling about the site of injection, or hay fever, or urticaria immediately following the injection. These reactions may occur despite any attempt made to determine dosage. They may occur early in the course of treatment, or late when high concentration of antigen is used, but in our own experience we have found that reactions do not cause any harmful effect other than the discomfort and symptoms, such as hay fever, urticaria or asthma, that may result from them. They are only temporary, and we have found in a large number of cases studied that usually reactions such as these go hand in hand with good results.

The procedure suggested by Doctor Matzger for determining initial dosage in treatment of hay fever is not a new one, and has been described—as stated by him—by Cooke and Walker, but insofar as we know at the present time there is no other method by which quantitative test of the patient's sensitivity can be made, and therefore it is suggested that all who are treating hay fever with pollen antigen employ this method, as it is the best we have at hand at this time.

In regard to the treatment of patients who give reactions: It is advisable, as suggested by Doctor Matzger, and others, that the dose be repeated at the following visit instead of increasing the same because of the possibility of severe constitutional reactions that might ensue following an increase in the dose of pollen antigen. One should not hesitate to repeat this dose as many times as the patient has reactions; in fact the patient will appreciate your doing so. However, if the period between the anticipated seasons is short in view of the number of treatments planned for the patient, increase the frequency of treatment so that the course may be completed by the time the season begins.

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ALBERT H. ROWE, M. D. (242 Moss Avenue, Oakland).—Doctor Matzger's emphasis on the necessity of a thorough understanding of pollen dosage by all physicians who assume the responsibility of pollen therapy is most important. To obtain results strong extracts must be used, but the doses of these extracts should be adjusted to the sensitiveness of each patient to the specific antigen. A printed schedule, such as is furnished by commercial houses, cannot be blindly followed. The initial dose must be determined by a skin-testing, as outlined by Doctor Matzger. I have found that .025 or .05 cubic centimeters of the dilution, which just fails to give a three-hour reaction by the scratch method, is safe in the average patient. Certain very sensitive patients demand a solution of 1 to 25,000 or even 1 to 100,000. As the treatment progresses, the dose must be determined entirely by the patient's local reaction. Doses must be repeated if the reaction is larger than three or four inches and constitutional reactions must be guarded against with care. Patients who are sensitive should be told about such constitutional reactions and instructed to return to the office immediately if any general itching,

coughing, or the slightest asthma occurs. Fresh adrenalin 1 to 1000 must be at hand and liberal doses must be given every five to fifteen minutes if general reaction develop.

There is no therapeutic measure which requires more care than pollen therapy. It is safe, as evidenced by the extensive use of it by specialists for several years. It is an agent for the greatest good if used correctly, but if used without due care and experience severe and even fatal results may occur. I have not found the necessity of strophanthin in any general reaction. Those which have occurred in my practice have been rapidly controlled by adrenalin because the patients are all instructed about returning to the office.

Physicians who wish to use pollen therapy should do so because of the tremendous relief given, but their understanding of proper dosage is absolutely necessary if the patient is to be given the result he deserves and is to be protected against serious reactions.

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DOCTOR MATZGER (Closing).—I thank Doctor Rowe for further emphasizing the necessity of individually dosing each patient's treatment. As Doctor Piness indicated, Doctor Cooke and Doctor Walker's technique of determining individual sensitiveness should be thoroughly understood and borne in mind by all doctors attempting to treat diseases of human hypersensitiveness.

We can look forward to the future with the hope that biological standardization of pollen extract activity may be determined which would enable one accurately to determine the proper dosage.

## THE LURE OF MEDICAL HISTORY

### THE EVOLUTION OF MELOTHERAPY

#### MUSIC IN THE CURE OF DISEASE

By PAN. S. CODELLAS, M. D.  
San Francisco

THE term "melotherapy," I believe, was coined by Dr. Mousson Launage in 1924 to signify the effect of music on the progress or cure of disease. The word is not found in the general or medical dictionaries. It may be accepted as a perfect etymological creation to the content even of the ultragrammarians.

It is derived from melos, of the same root as melody, and of therapy. Melos, according to Plato, was composed of three parts: of words, harmony, and rhythm (Rep. 368D); also it means the music to which a song is set, an air, melody, melas: tune. Therapeia, as defined by Liddell and Scott, denotes service done to the sick, tending; remedy, cure. Therefore, we may say, melotherapy means the treatment of disease by music as a therapeutic agent. A new term for an old therapy.

Sound is the principal medium by which most of the higher animals both express and excite emotion; it is used as a warning to effect self-preservation, precedes language, and is an instant, instinctive, prehuman phenomenon.

Darwin sufficiently studied the biological basis of tone and established that the strong appeal of sound to emotions is founded in the life history of the higher animals.

With such intimately interwoven existence and deeply rooted origin of the significance of sound and life, the genesis and growth of both music and medicine and their association is lost in the adumbrated past, wherein only a single but bright beam of crystallized tradition has survived and passed on summated in Orpheus.

#### MUSIC AND MEDICINE IN MYTHOLOGY

The Greeks ascribed the invention of the lyre to their Hermes. The latter after inventing the lyre gave it to Apollo, and received from him in exchange the "golden three-leaf rod," the giver of wealth and riches, the Caduceus.

The relation of music and medicine is not new. Apollo is god of both. We may consider them as sister arts. Apollo was the father and the leader of the Muses, hence called Musagetes. Apollo in Homer is the god of archery, prophecy, and music; to his arrows were ascribed all sudden deaths. By his shafts, Apollo was the god of pestilence, which he removed when duly propitiated. He is named in mythology as the father of Aesculapius, god of healing. Cheiron, the centaur, was the teacher of Aesculapius in medicine. With music, Aesculapius procured sleep, relieved pain, and to the tune of epodes compounded medicines. Machaon and Podalirius, sons of Aesculapius, and the other hero-physicians of the times and later ages, applied medicines and prepared the same while reciting and singing certain formulae.

Orpheus is presented to us as a poet, a rhapsodist, priest, theologian, magician, physician, apostle of civilization, prophet, philosopher and benefactor of humanity. Traditions relating to him are very obscure. His native country was Thrace; here we see the Thracian civilization and culture descending southerly toward Greece. His time is placed not long before the Trojan War, or at the period of the Argonaut expedition: twelve to thirteen centuries B. C. He is the son of Apollo. He was one of the Argonauts; the enchanting tones of his lyre moved the Argo smoothly into the water. His skill to strike that instrument was fabled and many legends have been created around it.

It is said to have been such as to move the very trees and rocks, and the beasts of the forest assembled round him as he touched its chords, and to so charm the Infernal Powers as to stay their immutable functions and torments.

He had for his wife a nymph named Eurydice, who died from the bite of a serpent. Disconsolate at the death of his wife, he determined to descend to the Lower World and endeavor to mollify its rulers and obtain permission for his beloved Eurydice to return to the Region of the Light. Armed only with his "golden shell," he gained admission to the palace of Pluto. This myth has been the subject of many poems, those of Virgil and Ovid giving the most graphic conception. As Orpheus pleaded his case and touched

the strings to his words, the bloodless spirits wept. Tantalus did no longer try to catch at the retreating water, and the wheel of Ixion stood still, as though in amazement; the vultures did not tear the liver and entrails of Tityus; and the granddaughters of Belus paused at their urns; Sisyphus did seat himself on the stone instead of rolling it. All the shades at endless tasks had a rest and relief. The story is, that then, for the first time the cheeks of the Eumenides, overcome by his music, were wet with tears; nor could the royal consort, nor he who rules the Infernal Regions endure to deny him his request. Pluto and Proserpina granted the request, and called for Eurydice. She was among the shades newly arrived, and she advanced with a slow pace by reason of her wound.\*

Amphion, a Theban prince, it is said, built the walls of Thebes, causing the stones to take their respective places in obedience to the tones of his golden lyre.

Achilles, to relax his anger, picks up his lyre and plays upon it.

Ulysses, wounded in Parnassus by the wild boar, with music stopped the bleeding, pain and sufferance, and obtained a quick and perfect healing with a very small scar.

#### MUSIC IN HISTORY

Pythagoras regards music as an admirable remedy for body and mental ailments.

Democritus states that "in many diseases the sounds of flute have been a sovereign remedy."

Aulus Gellus relates: "It is a belief widely scattered that a man afflicted with an attack of sciatica feels the intensity of his illness sensibly diminish if anyone playing close to him elicits soft and melodious sounds from a flute."

Celsus recommends flutes, cymbals, trumpets, and other noisy instruments for the demented.

Theophrastus cured a snake bite using music.

According to the iatrohistorian Hecker, the effect of music as a healing agent on the dancing mania of the Middle Ages was very efficacious. The governments of the afflicted countries learned that music was a specific remedy in these epidemics and actually hired musicians to play before the populace in order to dispel the attacks.

Spencer, Diderot, Rabelais, and the late Sir Frederick Mott, all acknowledged the force and therapeutic value of music.

Music, with the present-day means of broadcasting, reappears in her old association with medicine, serving as a useful auxiliary at the bedside of the sick, convalescent, and rehabilitating.

Dr. Robert Schauffler, American, has suggested a veritable musical pharmacopeia.

240 Stockton Street.

\* Ovid, x, 1-147. Adapted from the translation of H. T. Riley.



CLINICAL NOTES AND CASE REPORTS

RECTOVAGINAL FISTULA IN INFANCY

REPORT OF CASE

By LLOYD A. CLARY, M. D.  
San Francisco

RECTOVAGINAL fistula is sufficiently rare in infancy that a case of this kind is of interest, especially when the cause seems apparent. Its rarity is evidenced by the fact that a careful search of recent medical literature fails to disclose any reference to rectovaginal fistula in infancy. Standard textbooks on proctology, pediatrics, and gynecology either do not mention this condition at all or pass it over with the explanation that it is congenital.

REPORT OF CASE

On July 11, 1929, a Chinese baby, eight months old, was referred to me for examination. The mother gave a history of difficult defecation, pain and bleeding occurring with each bowel movement since the baby was one month old. She was quite emphatic and seemingly very sure of herself as to this point, stating that during the first month her baby had no pain or bleeding from the rectum. The only concurrent trouble was a skin rash on the buttocks which she said a visiting health nurse attributed to improper care of the diapers—a very logical and likely explanation. She had used various ointments and medicines the exact nature of which I was unable to learn. The baby was fretful, slept poorly, seemed to have extreme pain with each bowel movement (three or four daily), and was not gaining in weight. The weight at this time was fourteen pounds six ounces.

Examination in the office obviously was very difficult. There was a swollen area, hard to the touch, on the perineum. A small reddened area was visible in the posterior commissure of the vulva. The anal canal, of course, was narrow but I was able to insert my little finger into the rectum, where a mass of hardened feces was felt. Likewise the swelling of perineal area was quite apparent to the touch and a number of enlarged anal papillae were palpable. I was quite sure that a rectovaginal fistula was present but did not wish to base my opinion on one examination, so instructed the mother to irrigate the rectum through a catheter daily and to return in a few days for further examination. Wassermann was ordered and proved negative.

The second examination convinced me that my diagnosis was correct. However, I could not use an anoscope without undue roughness and was unable to find either the anal or vaginal opening of the fistula, though the reddened area posteriorly just within the vagina seemed undoubtedly one point of opening. I then advised examination under anesthetic in the hospital, with the proviso that I would operate at that time if I found definite indication for operation.

*Operation.*—July 19, 1929, at Saint Francis Hospital, San Francisco. Anesthetic used was ether. Patient was placed in the lithotomy position, a nurse supporting the legs. On inserting a Hirschman anoscope the anal opening was apparent at once, located between two enlarged papillae in a torn-down crypt of Morgagni in the midline anteriorly. It was easy to enter this opening with an ordinary crypt hook. Through this opening a small probe was inserted and the tract followed to the opening just within the posterior vaginal commissure. The probe was bent upon itself and anchored out of the way so that the enlarged anal papillae could be dealt with first.

There were five of these papillae, each enormously enlarged as compared to the size of the baby. They

would have been large even in an adult. All five were excised.

The entire fistulous tract then was excised and the perineum repaired in layers. This was nerve-trying work, owing to the extreme delicacy of these baby tissues. A very small, curved eye needle was used and the finest of plain catgut. I used catgut throughout because I anticipated discomfort on the part of the patient, with consequent crying and struggling as well as difficulty in removal of sutures, should I use a nonabsorbable material such as silkworm gut. I now believe this was an error, for the tension sutures and part of the skin sutures gave way too soon, with some separation of the external layer. I would use silkworm gut for skin and tension sutures just as in the adult, should I repeat this operation, even at the expense of certain difficulty for a few days.

However, the parts healed rapidly and result was good. There was no pain at all with bowel movements after the third postoperative day. The patient left the hospital on the eleventh day and could have left days sooner, but was kept there to allow a proper diet to be established. The baby had received only unmodified milk and water prior to entry to hospital. There cereals were added and the mother instructed as to proper feeding.

Two days after entering the hospital, July 21, 1929, the weight was fourteen pounds six ounces. Nine days later the baby had gained one pound three ounces.

Examination at the office August 2, 1929, showed the parts entirely healed, anal canal not tender on insertion of finger, and perineum firm. The mother reported there was no pain or bleeding with bowel movements, and the baby looked well and happy. By September 13, 1929, the weight had increased to eighteen pounds.

This case is especially interesting from the fact that the cause of the fistula was quite apparent, namely, the breaking down of an anal crypt anteriorly—most likely following passage of hard fecal matter—thus starting a fistulous tract which eventually opened in the vagina. Evidently it was *not* congenital.

Pain at defecation may have been due to two causes:

Firstly: Pain produced by passage of feces over the fissured area in the anal canal.

Secondly: Sphincter spasm induced by irritation of the enlarged papillae. This latter condition, with consequent hypertrophy of the sphincter and subsequent tightening of the anal canal, is seen frequently in the adult and is the cause of a form of constipation (or more properly obstipation) that is very common.

909 Hyde Street.

Eleven Colleges Require Internship for Degree.—Eleven medical colleges have adopted the requirement of a fifth year to be spent by the student as an intern in an approved hospital or in other acceptable clinical work before the M. D. degree will be granted. These colleges and the years when the requirement became effective for matriculants and graduates are as follows:

	Affects Matricu- lants	Affects Gradu- ates
University of Minnesota Medical School..	1910-11	1915
Stanford University School of Medicine....	1914-15	1919
Rush Medical College (University of Chicago) .....	1914-15	1919
University of California Medical School..	1914-15	1919
Marquette University School of Medicine	1915-16	1920
Northwestern University Medical School	1915-16	1920
University of Illinois College of Medicine	1917-18	1922
Loyola University School of Medicine.....	1917-18	1922
Detroit College of Medicine and Surgery	1919-20	1924
University of Cincinnati College of Medi- cine .....	1922-23	1926
College of Medical Evangelists .....	1922-23	1927

—The Diplomat, May 1930. ..



# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

## THE TREATMENT OF JUVENILE TUBERCULOSIS

LLOYD B. DICKEY, SAN FRANCISCO.—The amount of infection and the degree of immunity and resistance are primary factors determining the outcome of tuberculous infection in children. We have several aids in our treatment of such cases, the rationale of which is based on an endeavor to influence these primary factors. Three items are of importance, the removal of the patient from all contact with open tuberculosis, the application of heliotherapy, and the general hygienic treatment. The first mentioned is by far the most important, as a large percentage of tuberculous infants and children will recover with no other change in their environment, even though in some the infection may be rather heavy. Heliotherapy may be a two-edged sword, and cases for this type of treatment should be carefully selected, and the treatment begun and continued with great caution. Cases of hilar node infection and cases of surgical tuberculosis respond well, the exudative types rather poorly in comparison. Under the general hygienic treatment should be included the proper amount of rest; the proper diet, which, because of the growth factor, is more important in children than in adults; the correction of any faulty habits and the establishment of a regular regime of existence; the proper treatment of any nontuberculous disease that may be present. In the surgical cases it should be remembered that bones, joints, and lymph nodes are usually only local manifestations of a more or less generalized disease, and that these children, in addition to any surgical measures instituted, should have the accepted treatment of juvenile tuberculosis. The statement that time is not a factor to be considered in treating children is an argument often advanced against surgical procedures on tuberculous children. I believe that any surgical procedure that really hastens the recovery from active tuberculous disease is justified. The longer the disease is active the more apt are other tuberculous foci to appear, the more apt are the cases to end in meningitis, miliary tuberculosis, or in amyloid disease.

In the last three years we have had the opportunity to watch the results of treatment of seventy-one patients in a municipal ward for tuberculous children, where the treatment has been similar to that which has just been outlined. Thirty-four of these seventy-one children had uncomplicated hilar node tuberculosis, and the others had various additional foci. There have been six deaths, four from meningitis, and two from amyloid disease. Two of these had the meningitis when admitted to the ward, and in the two cases of

amyloid disease, the condition was present on admittance. One child with a tuberculous pericarditis developed the meningitis later, and the other after going home against advice. In two children the prognosis is still doubtful. Sixty-three of the total of seventy-one children, or 89 per cent, are well, and thirty-nine of these have been dismissed from the ward as being no longer actively tuberculous.

\* \* \*

CLIFFORD SWEET, OAKLAND.—In all human affairs the pendulum of thought or opinion swings too far, first in one direction and then in the other. A few years ago we were ready to label as tuberculous any reaction to infection which caused a prolonged low grade fever, especially if the additional symptom of fatigue and sign of weight loss were also present. Then, upon finding that many of the patients having such signs and symptoms recovered without displaying any recognizable signs of tuberculosis, and being in addition greatly comforted and reassured by the simultaneous and almost complete disappearance of bone tuberculosis from our practice and clinics, we reached a conclusion well toward the other end of the pendulum swing and became much more loath to think of early tuberculous infection in interpreting such signs.

Within the past few years we are again returning a considerable way toward our earlier view and are convinced that tuberculosis cannot be dismissed except by exclusion in considering any child (1) who has prolonged low grade fever otherwise not explained, (2) who fails to recover completely within normal limits from an acute infection especially of the respiratory tract or from such an infection as measles, (3) who has an infectious process of long standing within the confines of the respiratory tract with readily demonstrable pathological changes such as enlarged peribronchial glands with infiltration of the peribronchial lymphatic structures or a bronchiectasis.

In attacking the problem of determining whether or not tuberculosis is present in the child-patient, a history of exposure is of the greatest importance. If the child has at any time during his life spent any time living with an individual who was known to have open tuberculosis, we can be almost certain that living tubercle bacilli gained admission to his body, whether or not they are now playing any part in his health problem. Long and intimate association generally produces massive infection.

Inability to obtain any record of exposure while valuable cannot be given too great weight. Sources of infection with which casual contact is



made are too well known to need detailed description. However, an elderly relative who is said to have a "chronic bronchitis" or "asthma" and who has an intermittently open, chronic fibrous phthisis must not be dismissed from one's mind too lightly.

Also in considering this problem one must have clearly in mind the nature of the body's response to tuberculosis. Except in the presence of massive or very virulent infection the disease makes inroads slowly and between periods of activity there are in the beginning long periods of quiescence any one of which may not be succeeded by activity but by complete and lasting healing.

There is no field of medicine which calls for more careful, painstaking and detailed clinical work followed by thoughtful clinical interpretation than does the diagnosis of early tuberculosis in young children. Only as an extension of our best clinical efforts and as an aid to our best clinical judgment should we think of such valuable aids as the tuberculin test and the roentgenogram.

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DONALD K. WOODS, SAN DIEGO.—Early diagnosis of latent cases and more active interest in the so-called pretuberculous child, I believe are the two most important factors in the juvenile tuberculosis problem.

All undernourished children and those suffering from recurrent colds, chronic fatigue and other chronic symptoms, should be carefully examined and reexamined for a possible tuberculous infection. Intradermal tuberculin tests should be used as the Von Pirquet type of tuberculin test when negative is not reliable in these latent cases in children. Stereoscopic x-ray of the chest should be routine in all below par children who come under our observation.

The pretuberculous, undernourished type of child, and the child with a proven glandular or other quiescent tuberculous infection, both respond well to accepted methods for improving general health and increasing weight. Children of this type may be cared for in the home, but I have found that in most cases more rapid results in building them up may be obtained if they are treated in groups in a small institution. Home conditions and contacts, regardless of the social status of the family, often defeat efforts toward rapid improvement in appetite, gain in weight and proper routine.

This short article has for its purpose the emphasizing of the need of more interest in chronic conditions in children, particularly those in children who appear as private patients at our office. These little patients do not often receive the same suspicion or searching investigation that our clinic patients do. I feel that we are therefore overlooking a great many cases of juvenile tuberculosis with a sweeping diagnosis of malnutrition, chronic anorexia, or recurrent upper respiratory infection.

I feel certain that it is possible to bring practically all underpar children, even those with an

early or quiescent tuberculosis, up to what would be considered normal for each individual child. This, however, can only be accomplished when we spend less time writing about and working on acute illness, which with children is usually self-limiting, and devote more thought and time to the child who is under par, and either suffering from chronic or potential illness.

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WILLIAM M. HAPP, LOS ANGELES.—The treatment of tuberculous infection in infants and children may be briefly summarized as follows:

1. Removal of the infant or child from the focus of contact. This is most important, as no amount of care will avail if repeated fresh infections take place through contact with an open case. This contact may come from a parent, relative, nurse, or, not infrequently, from a servant, particularly a cook.

2. Prevention of upper respiratory infections. These infections serve to activate quiescent tuberculosis and delay healing. Important items in prevention are:

- (a) Removal of foci of infection in nose and throat as tonsils, adenoids, paranasal sinuses.

- (b) The beneficial effects of a high dry climate are chiefly due to the lessened amount of upper respiratory disease.

- (c) Prevention of contact with children or adults with acute respiratory infections. School attendance should be prohibited during active infection.

3. Rest. Absolute bed rest is not possible with infants and young children, but their activity can be controlled. With older children rest is essential and their coöperation can nearly always be obtained. Prevention of fatigue is essential.

4. Sunlight. In general, direct exposure should be withheld during febrile periods and active pulmonary disease. It is beneficial in other forms of tuberculous infections; *e. g.*, skin and bone disease during active stages. The exposures should be carefully regulated. The same applies to ultra-violet radiation.

5. Diet. Overfeeding or "stuffing" should be avoided and a well balanced diet offered; allowing the appetite to guide quantity. The diet should include ample protein and should be rich in minerals and vitamins. Cod liver oil or viosterol should be added. Milk should not be over-emphasized, as drinking too much milk tends to dull the appetite for other food.

6. Tuberculin therapy. This is useful in certain forms of the disease, particularly phlyctenular kerato-conjunctivitis. Its use is very limited and, in certain forms of active infection, may actually be harmful.

7. Treatment of tuberculosis of special organs by surgical or other measures as the situation demands.





interest to members of the California Medical Association who were unable to attend the Del Monte meetings, and accordingly are here given. The detailed reports are printed in the regular California Medical Association columns in this issue.

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*Next Year's Annual Session to Convene at San Francisco.*—Seven years have passed since an annual session of the California Medical Association was held in San Francisco. Next year, however, California Medical Association members again will gather in the city by the Golden Gate. The exact hotel headquarters have not yet been determined, but the time of the meeting has been set for Monday, April 27 to Thursday, April 30, inclusive.

Since the last meeting in San Francisco in the year 1923, many physicians have come to California to join the California Medical Association through its county medical societies. A very considerable number of such colleagues have not visited San Francisco, and will no doubt be very glad of next year's opportunity to partake of the atmosphere which makes San Francisco known everywhere as one of the great cosmopolitan centers of the world. In addition to the usual scientific and social programs, opportunity will be given by the medical schools of the Universities of California and Stanford, and by the Hooper Foundation, for clinics and other demonstrations. Members of the California Medical Association will do well to make a note on their calendars of these dates, and to determine to attend this San Francisco session. It should be our banner year for a record-breaking registration at an annual session.

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*Incorporation of the "Trustees of the California Medical Association."*—For the last several years the minutes of the House of Delegates and Council have made references to tentative plans for incorporation. More than a half century ago, when our state medical association came into existence, it was incorporated. That incorporation, which was made under the then name of the California Medical Association—"The Medical Society of the State of California"—at the end of fifty years was permitted to lapse. The California Medical Association as it now exists is not incorporated. The name "Medical Society of the State of California"—in order to safeguard and protect the same—was taken over by a subsidiary organization or department of the California Medical Association, namely, that which carries on its Optional Medical Defense.

As stated in the report of the Council, votes of more than two-thirds of the members of the California Medical Association authorized incorporation after the plans discussed by the Council and the House of Delegates at the 1929 San Diego annual session. The final step was taken by the Council at its last meeting at the Del Monte

session, when the Articles of Incorporation were signed. The formal filing was made with the Secretary of State May 8, 1930, when the corporation, "Trustees of the California Medical Association," came into existence. At a special meeting of the Council held at San Francisco May 17, 1930, the by-laws were approved and the organization of the corporation was practically consummated. In proper time a full report on this subject will be made. Among other advantages of such incorporation it will now become possible for all persons wishing to make provision for medical or public health bequests or legacies in their wills to do so in favor of this corporation, in full knowledge that through the same the provisions of such trusts will be faithfully carried out in perpetuity.

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*Medical Service Plans.*—The publicity given to the various plans which were being studied by the Council of the California Medical Association to give proper medical and surgical care to those lay citizens, who under modern-day living conditions are confronted with incomes of such amounts as to make sickness or injury a most serious drain on financial resources, brought out during the year a very considerable amount of interest and discussion. At this time it is only possible to report that different plans are still being studied, and that no one plan has been sufficiently elaborated to give indication of early adoption. It was first necessary to know exactly what were the legal problems involved, and to that end the opinions of both the general counsel of the California Medical Association and of another noted firm of California barristers were secured.

The studies and reports by Doctors John H. Graves of San Francisco and John C. Ruddock of Los Angeles, to be printed in the July issue of CALIFORNIA AND WESTERN MEDICINE, will bring additional interesting facts and figures to the attention of the profession. The subject of proper medical service for all citizens is of great importance, and the problems involved therein are many and difficult of solution; but it is the intention of the officers of the California Medical Association to carry on as accurate and comprehensive studies as possible in the hope that ways and means may be found for a betterment in the present state of affairs. If those efforts are successful, the county units and the members of the California Medical Association later on will be given full information.

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*Formation of a Council on Medical Economics Recommended to the American Medical Association.*—A recommendation from the California Medical Association will be submitted to the American Medical Association House of Delegates at its annual session in Detroit, requesting that body to authorize the formation of an Ameri-

can Medical Association Council on Medical Economics. It certainly seems reasonable to expect that our national medical organization will not be averse to deputizing to a committee of its members, to be known as the Council on Medical Economics, the responsibility of getting information and submitting the same to the proper authorities of the American Medical Association so that a more active interest may be taken in these many phases of medical economics, which in many of the state units of the American Medical Association, as well as in lay newspapers and periodicals, and through self-appointed organizations outside the American Medical Association, have been receiving so much attention and publicity.

Why should not the American Medical Association, with its splendid central organization and facilities, take the lead in such an important matter and, through its intimate contacts with the state medical societies, secure coöperation in the study and solution of the serious economic problems which almost everywhere seem to confront medical practice of the today and the tomorrow? If the American Medical Association can have a "Council on Physical Therapy," for instance, why should it hesitate to have a "Council on Medical Economics," which could make surveys and reports on the matters coming within such a jurisdiction? The California delegates to the American Medical Association have been instructed to present at the Detroit session of the American Medical Association the proper resolutions and amendments for the formation of such a council.\* We shall await with interest the action of that organization thereon.

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*Resolutions Concerning Treatment of Narcotic Addicts.*—One of the resolutions makes the suggestion that the Committee on Public Policy and Legislation of the California Medical Association take steps at the 1931 session of the legislature to bring into being such amendments of our state laws as would make possible the appointment of a "medical narcotic commission." Under present conditions, the California laws, if stringently and literally construed by the lay directors and inspectors having charge of this work, are of such form as to easily subject to arrest, and to resultant humiliation and disgrace, any medical man who gives treatment to a border-line narcotic patient. Such a state of affairs is obnoxious to the interests of the public health and of the medical profession and should be properly modified. Members of the Association who are interested should feel free to communicate any suggestions to the chairman or members of the State Committee on Public Policy and Legislation. (See front-page index for proper reference page, for personnel of all committees.)

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*Suggestion of the Committee on Public Policy and Legislation.*—The report of the Committee

on Public Policy and Legislation ends with the statement that 1930 is a state election year. In other words, many candidates for the state legislature, in either the senate or assembly, who will submit their names in the primary election are already looking after their personal campaign interests. In equal measure, it behooves the medical profession to also look after its own interests, to the end that persons known to be inimical to sane public health measures shall be opposed by citizen candidates who are known to favor constructive measures in conservation of human health and life.

The officers of every county medical society have a special responsibility in this matter. That responsibility cannot be shifted. Lack of interest in this important matter is almost akin to disloyalty to public health and organized medicine standards. Every county medical society should have an active local committee on public policy and legislation. If it does not have such, the president and secretary of each society should jointly take on this work. The members of make-believe county committees on legislation should resign and give way to colleagues who are willing to do service.

A survey of the political situation, in relation to assembly and senate candidates, should be instituted at once and a report made at an early meeting of each county society or of its executive board. If this be done, the local situations can be clarified with far less work and worry than later on. Every member of the California Medical Association should make it his business to know who are the candidates to the assembly from the district in which he has his residence. In the future the problem with senators will be simpler, although not less important, because state senators will hereafter be limited to one for each of the larger counties instead of numbers based on proportional population, as in the past. The smaller county medical societies can therefore be of distinct and powerful service when they use their influence to elect state senators who are kindly disposed to proper public health standards. In due time, more on this important subject.

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*Many Other Matters Worthy of Mention.*—It would be possible to continue comment on many of the other matters which were mentioned in the reports of officers and of standing committees and in the minutes of the House of Delegates and of the Council. Space requirements for other departments of CALIFORNIA AND WESTERN MEDICINE make it impossible to make such in this issue. Should occasion arise, comment will be made on special subjects in subsequent issues. In the meantime, every member of the California Medical Association who desires to know what his colleagues, who are his elected or appointed representatives, are doing in the transaction of the business of the California Medical Associa-

\* See Medical Economics column in this issue.



tion and its county units should make an effort to look through the Del Monte session proceedings as printed in this issue. If that is done, organization work during the coming year will receive a real impetus because of the greater coöperative interest and efforts of a larger number of its members.

#### DR. HOLMAN OF STANFORD IS AWARDED THE SAMUEL D. GROSS PRIZE

*A Middle-West Group of Nineteenth Century Physicians.*—From the Ohio valley, especially from the Cincinnati and Louisville medical schools, in the early days of the nineteenth century went forth a notable group of physician teachers and leaders. Included among such were Daniel Drake, the elder and the younger Gross, Bartholow and others, who not only left a deep impress upon the medical thought of their period, but whose high standards of research and service still exert an influence on modern-day practice. Philadelphia, home of one of America's pioneer physicians—Dr. Benjamin Rush, he who was one of the signers of the Declaration of Independence by the Colonies—still honors the memory of Samuel D. Gross by a prize which is awarded every five years through the Philadelphia Academy of Surgery for

"the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice founded upon original investigations, the candidates for the prize to be American citizens."

"It is expressly stipulated that the competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page it shall be stated that the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery."

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*Doctor Holman's Essay on "Abnormal Arterio-venous Communications."*—Californians may be proud in the knowledge that the 1930 award of the Samuel D. Gross Prize of \$1500 was awarded to a California Medical Association colleague—Dr. Emile Holman, whose work in the Stanford University Hospital has long been well known in this state. Doctor Holman's essay was entitled "Abnormal Arteriovenous Communications." It deals with the effects upon circulation of the blood of unusual openings between the large arteries and veins produced by gunshot wounds, knife thrusts, and congenital abnormalities of development.

CALIFORNIA AND WESTERN MEDICINE takes pleasure in calling attention to this recently announced award. On behalf of his colleagues in California, CALIFORNIA AND WESTERN MEDICINE extends congratulations to Doctor Holman on this honor which he has brought to himself and to the medical profession of the Golden State. May his good example be emulated by others so that, in the passing of the years, the record of California in research studies may be such as to compare

favorably with that of other states and countries; and also be of the kind one has a right to expect from the physicians of a commonwealth where the joy of living and service is cast in as exceptional surroundings as exist in California.

*Cerebrospinal Meningitis.*—In the one hundred and twenty-three years since cerebrospinal meningitis first swept "like a flood of mighty waters, bringing along with it the horrors of a most dreadful plague" into the little town of Goshen, Connecticut, where Dr. Elisha North was in practice, many observers have noted the variable death rate of the disease. In reading North's book, "A Treatise on a Malignant Epidemic, Commonly Called Spotted Fever, etc.," New York, 1811, which was the first publication on cerebrospinal meningitis, we are astounded at the success with which this Connecticut doctor attended his patients, for out of about two hundred he lost only two. This record set by North has never been surpassed, and certainly today a physician whose mortality rate is under 50 per cent considers himself a most successful practitioner. In a series of cases treated at one of our metropolitan hospitals in the last few years, the death rate was about that figure. Prior to the introduction of serum the mortality rates in the country, as a whole, were about 75 per cent, and during the World War it was not uncommon for a physician to lose one-half of his patients when the disease broke out in an Army camp or hospital. On the other hand, during certain epidemics the mortality has been remarkably low, and we presume that this must have been the case during the Connecticut epidemic of 1807-1811 described so vividly by North. That there is such a wide variation in the mortality of patients with this disease is one of the outstanding features of its epidemiology.—*The New England Journal of Medicine*, April 10, 1930.

#### State Fund's New Method of Paying Dividends.

1. Since the doors of the State Compensation Insurance Fund were opened on January 2, 1914, the large sum of over \$17,500,000 has been returned in the form of dividends to employers in California. This is one of the main reasons why employers patronize the State Fund in increasing numbers. While the rates charged for compensation coverage have to be the same as the charges of the private companies, under the law, the cost of administering the State Fund is low and this enables the returns to be made to California's employers. Incidentally, the premiums received pay all costs, and the state treasury does not contribute money to the Fund's upkeep.

2. There are employers who fail to recognize the truth that they are important factors in setting the compensation premiums. The latter are based on the industrial deaths and injuries. The reductions in accidents to workers mean lower premiums. Those industries with comparatively few injuries pay low premiums. There is need to emphasize this truism, because it shows the financial values in preventing accidents, and the lower the premium the smaller the cost that has to be charged to consumers.

3. The dividends now payable to employers by the State Compensation Insurance Fund will be distributed on the basis of accident experience. This will give an added impetus to safety activities, because the loss ratio of policyholders will be taken into consideration. This new plan gives a larger reward to those employers who have helped produce the surplus earnings out of which dividends are paid.—*California Department of Industrial Relations. Report to Governor's Council.*

# MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

## Urology

**E**xperimental Perfusion of the Frog's Kidney.—In view of the very valuable and interesting studies of Richards and co-workers in this country with the frog's kidney, some recent studies by Hartwich<sup>1</sup> are of interest. When the pressure of a Ringer's solution perfused through an isolated frog's kidney is raised, there is an increase in the amount of urine secreted but this is not always proportional. When the iliac artery is ligated, the amount of urine is greater but the flow less than when open, a condition that is explained by the fall in the pressure in the aorta and not by a reabsorption in the tubular cells. The perfusion pressure by way of the portal vein must be raised to about 8 to 10 centimeters before urine is secreted, which is then due to the back-flow through the anastomotic vessels of the tubules to the glomeruli. The chlorids of the urine were found to be less than of the fluid perfused and the urine is sugar-free so long as the sugar percentage in the perfusion fluid is not above 0.05 to 0.06 per cent. And Hartwich concludes that this result is due to the low permeability of the kidney filter and not to reabsorption of sugar. Increasing the acidity promotes the rate of perfusion and secretion, whereas changing the hydrogen ion concentration towards the alkaline side diminishes both. Hypertonic perfusion fluids diminish perfusion and secretion, whereas hypotonic fluids increase both. Increase of the calcium ions increases the perfusion rate and amount of urine but, if the increase is great, then urine secretion stops altogether. Grape sugar in different concentrations, as well as other kinds, has no action upon the perfusion rate or diuresis of the isolated frog's kidney. Magnesium and sodium sulphate in certain concentrations slow the perfusion rate and increase the amount of urine. It was found that a low concentration with sodium sulphate diminished the rate of flow and secretion, and magnesium sulphate was active only when the iliac artery was tied. The action failed with an open artery because of the antagonistic calcium salts transported in the kidney. In no experiment was a diuretic action noted except when there was a corresponding change of the rate of flow, so that it is concluded that secretion of the urine is dependent to a high degree upon the rate of blood flow through the kidney.

Perfusion with a caffein solution of about 1:250,000 with the iliac artery tied off increased the rate of flow and secretion. With open vessels the amount of urine was proportional to the increased flow. With high caffein concentrations,

the diuresis lasted longer than the increase of perfusion rate. The effect of caffein did not wear off with repeated use, and its different effects were more or less proportional to the size of the dose used. Theophyllin gave results similar to caffein. Urea solutions of 1:100 to 1:500 increased the rate of flow and the amount of urine and the increased secretion never outlasted the increased perfusion rate. Urea diuresis, therefore, seemed wholly due to the result of effect on the blood vessels. Perfusion with sublimate and novasurol solutions increased urinary flow, which to some extent was independent of the rate of perfusion. Cadmiumchlorid, closely allied in its action to quicksilver, usually produced an increase which, in contrast to quicksilver diuresis, was usually parallel to the rate of perfusion. Strophanthin solutions increased the rate of flow and produced diuresis, whereas perfusion with atropin and pilocarpin had no effect. Phloridzin in concentrations of 1:50,000 to 1:5000 produced diffusion and in still higher amounts increased secretion. In concentrations of 1:3000 there was a diminished secretion and, under certain conditions, complete cessation of the formation of urine. Glycosuria appeared even in concentrations of 1:10 million up to 1:1 million. Glycosuria of phloridzin and diuresis have no interrelation as the glycosuria seems undoubtedly due to an increased permeability of the glomerulus. Chlorid secretion seemed in no way affected by phloridzin.

FRANK HINMAN, San Francisco.

## REFERENCE

1. Hartwich: Einfluss pharmakologisch wirksamer Substanzen auf die isolierte Froschniere. I. Mitteilung: Methodik, Einfluss des mechanischen und osmotischen Druckes, der Wasserstoffionenkonzentration, des Zuckers und des Magnesium und Natriumsulfats, Arch. f. exper. Path. u. Pharm., 111, 81-98, 1926. II. Mitteilung: Diuretika und andere Substanzen, Ibid., 206-217. III. Mitteilung: Die Wirkung des Phlorrhizins, Ibid., 115, 328-333, 1926.

## Medicine

**P**ituitary Tumors and Diabetes Insipidus.—While diabetes insipidus is not a common condition, it is occasionally met with in general practice and in some of the early or less marked cases it may be easily overlooked. The condition is characterized by the excretion of large amounts of watery but otherwise normal urine associated with excessive thirst. The patient may present no other symptoms and be apparently in excellent general health.

All the etiological factors in the production of diabetes insipidus are not clear, particularly in



the so-called *primary* or *idiopathic* cases which seem to be of the nature of an hereditary defect transmitted by parent to offspring. In many instances, however, it is due to a lesion affecting the floor of the third ventricle about the stalk of the pituitary body (*secondary diabetes insipidus*). It may be produced by fractures of the base of the skull, primary or secondary ventricular hemorrhage, or by tumors of the optic chiasm, the pituitary, or of the structures forming the walls of the third ventricle. It may be produced in experimental animals by puncture of the parainfundibular region, which suggests that in this situation there is a center which controls the excretion of fluid by the kidneys.

In *pituitary adenomas*, diabetes insipidus is not a common symptom until late in the course of the disease when extension of the tumor through the diaphragma sellae may result in a disturbance of the parainfundibular region. It may also occur after operative procedures, possibly due to trauma incident to the attempted extirpation of the tumor. In *craniopharyngeal pouch cysts* its appearance is earlier and more characteristic, due to the distortion of the floor of the third ventricle incident to the upward extension of the tumor. It may be the only symptom present for some time. When associated with failing vision, dwarfism, and increasing adiposity in a child, this tumor should be kept in mind as the possible cause. *Tumors of the optic chiasm*, originating just anterior to the pituitary stalk, are also a cause of the condition. Symptoms of pituitary hypoactivity may not be marked, progressive loss of vision associated with primary optic atrophy being more characteristic.

In view of the frequent association of diabetes insipidus with tumors in the region, it is important to investigate each case carefully in the attempt to determine its exact cause. A radiographic study of the skull should be made in each instance with particular attention to possible bony changes in the region of the sella or the presence of calcareous particles within or above it. Diminished visual acuity and alterations in the perimetric fields should be looked for. Ophthalmoscopic examination in tumor cases will usually show some degree of primary optic atrophy. The attainment of symptomatic relief by the use of nasal packs moistened with pituitrin can in no sense replace the examination for the etiological factor.

CYRIL B. COURVILLE,  
College of Medical Evangelists.

### Dermatology

**Blood Chemistry in Diseases of the Skin.**—Empirical observation has long ago established the importance of metabolic factors in the causation of systemic dermatoses, such as eczema, psoriasis, acne, seborrhea, pruritus, etc. Dietetic restrictions of various groups of foods, sugars, carbohydrates and fats or proteids were practiced at random in a purely experimental fashion.

Only recently systematic study of blood chemistry in systemic dermatoses has been taken up by various observers. The most comprehensive and outstanding contribution has been recently reported by J. Schamberg<sup>1</sup> of Philadelphia. Coming from so competent and conservative an observer with unexcelled facilities for research, this study is of particular interest and informative value.

Schamberg reports results of blood chemistry study of more than 1000 cases of systemic dermatoses of which 875 cases furnished complete blood study.

The blood was taken always in the forenoon, within one to four hours after breakfast. One of the most important deductions drawn by Schamberg from this study with respect to the nitrogen constituents of blood is that it is perhaps unscientific to inquire what is the maximum normal of nonprotein nitrogen, urea nitrogen or uric acid in the blood, but rather what is normal for a male or female of a given age. Speaking generally, men between the age of twenty and seventy have an average about 0.6 milligram more uric acid per hundred cubic centimeters than women. The study shows a steady rise in uric acid, uric nitrogen, and nonprotein nitrogen from the third to the eighth decade of life.

Whereas at the age of thirty the average uric acid for men is about 3.5 milligrams, the urea nitrogen between 15 and 16 milligrams and nonprotein nitrogen 33 milligrams, at the age of eighty the respective figures were 4.2, 20, and 38 milligrams. In contrast to the prevailing ideas and several recent publications, Schamberg found only a small number of instances where eczema was caused by a pathologic increase of dextrose in the blood.

Moderate increases of blood sugar were often due to the fact that the blood was taken too soon after breakfast. On reexamination after fasting, the blood was usually normal.

On the other hand, an excess of nonprotein nitrogen, urea nitrogen, and uric acid was distinctly more common in eczema than in other dermatoses, with the exception of generalized pruritus. The maximum normal of nonprotein nitrogen in the blood is 40 milligrams per 100 cubic centimeters of blood. Twenty-two and six-tenths per cent of 452 cases of eczema had 40 milligrams or more. The cases of general pruritus showed 36 per cent.

Maximum normal amount of blood urea nitrogen is 20 milligrams per 100 cubic centimeters of blood. Twenty-one per cent of eczema cases showed 20 milligrams or more of urea nitrogen in the blood. In cases of generalized pruritus the proportion was 44.4 per cent.

There is some difference of opinion as to the maximum of normal amount of uric acid in the blood. Of 455 cases of eczema 217 or 47.7 per cent showed 4 milligrams or more per 100 cubic centimeters of blood. The highest amount found was 7.6 milligrams. Of 143 cases of pruritus fifty-nine, or 41.3 per cent, showed an excess;

of fifty-two cases of psoriasis seventeen, or 37 per cent, were pathologic; of thirty-five cases of generalized pruritus seventeen, or 50 per cent, showed an excess. In other dermatoses uric acid was perceptibly less.

Schamberg draws the following conclusions:

1. Age exerts a distinct influence on the average nitrogenous content of the blood.
2. Males exhibit more nonprotein nitrogen, urea nitrogen, and uric acid in the blood than females.
3. In eczema and pruritus, particularly generalized, there is found a perceptibly higher percentage of patients with an excess of nonprotein nitrogen, urea nitrogen, and uric acid than in other dermatoses.
4. A study of the blood chemistry in patients with refractory dermatoses is of material aid in prescribing appropriate diets.

M. SCHOLTZ, Los Angeles.

#### REFERENCE

1. Schamberg, J. *Arch. of Dermatology and Syphilology*, January 21, 1930.

### Gynecology

**Cervicitis.**—Trauma and the inflammatory change connected with it involving the short length of the cervical canal is one of the most common conditions afflicting multiparous women, and results not only in producing discomfort but frequently serves as a focus of infection or even predisposes to cancer. Injuries incurred during childbirth and specific infections account for the majority of these cases; patients presenting themselves for relief of a troublesome discharge, which is the most common symptom.

However deeply the cervix is involved the treatment attempts to achieve the same end, namely to destroy the chronically infected and diseased tissue and to restore the normal anatomic relations. While hospital care combined with operative procedures has been the ideal treatment for cases of cervicitis yet treatment that is simple and which may be safely applied in office practice, will benefit a large percentage of cases that would otherwise receive no attention. A brief review of some of the newer methods which may be so used shows commendable progress along this line.

Destruction of diseased tissue may be produced by chemicals or by heat, either cautery or coagulation diathermy. Chemical agents such as acids or astringents have been employed for many years and still are widely used, but leave much to be desired, probably because of inability to bring them in actual contact with the tissue to be destroyed and because of their failure to penetrate to the deeper portions of the mucosa and stroma which are so often involved.

Destruction by heat received a great impetus from Dickinson,<sup>1</sup> who introduced the nasal tip

cautery for cauterization of the cervix. The use of the cautery in "cartwheel" cauterization of the cervix is well established. Coagulation-diathermy is well adapted to application in a similar manner.<sup>2</sup> The inactive electrode is applied on the sacrum or abdomen and the active electrode, which is about the size of a darning needle and protected to within three-eighths inch of its tip is applied to the cervical canal.

With the above two methods the amount of heat applied and depth of destruction cannot always be accurately estimated. Variations are due, when the nasal cautery is used, to quenching action of the mucus in the canal and, in the active-inactive electrode method, to the variation in resistance between the two electrodes.

This uncertainty may be obviated and uniform results achieved in a large degree by the use of a bipolar electrode.<sup>3</sup> Two wires spaced one-eighth inch apart serving as electrodes are attached to one side of an insulated tip which may be introduced into the cervical canal. Since the pathway of the current is between the two electrodes and the action local, the resistance to the current is therefore constant and by using the same amount of current in each case, practically the same depth of tissue will be destroyed, thus making for more uniform results.

Tissue destruction by cautery and by diathermy may be done without local anesthesia and in this respect diathermy probably causes less pain than the cautery.

#### SUMMARY

Cervicitis is a common condition and often a forerunner of more serious complications and needs simple and widely applied treatment.

Destructive heat offers the surest means of eradicating the diseased tissue and bipolar coagulation diathermy allows of uniform destruction.

JOHN E. POTTS, Los Angeles.

#### REFERENCES

1. Dickinson, R. L.: *Am. J. Obst. and Gynec.*, 1921, 17, 68.
2. Harriman, Walter F.: *Am. J. Obst. and Gynec.*, 1929, 18, 250.
3. Ende, Frank M.: *Am. J. Obst. and Gynec.*, 1929, 17, 78.

### Syphilology

**Mercury "Rubs."**—In the treatment of chronic lues the time-honored inunction of mercury still has a very definite sphere of usefulness. This method, however, is frequently discarded for some other because of inconvenience of administration. A six-ounce, smooth, oval bottle filled with water as warm as can be comfortably held in the hand makes an excellent implement for rubbing. The heat softens the ointment and reddens the skin, the smoothness of the glass minimizing irritation so that the same area between the shoulders may be used over and over again without pustulation. The skin may be wiped clean at the end of the treatment without loss of therapeutic efficiency.

F. F. GUNDRUM, Sacramento.



# TRANSACTIONS OF THE FIFTY-NINTH ANNUAL SESSION CALIFORNIA MEDICAL ASSOCIATION

DEL MONTE, CALIFORNIA, APRIL 28-MAY 1, 1930  
I. Pre-Convention Bulletin Reports; II. Minutes of the House of Delegates; III. Minutes of the Council.

## PRE-CONVENTION BULLETIN REPORTS\*

### REPORTS OF DISTRICT COUNCILORS

#### FIRST COUNCILOR DISTRICT

Imperial, Orange, Riverside and San Diego Counties

#### To the President and House of Delegates:

The President-elect and I made a visit to the Orange County Medical Society March 11, at which time a dinner was served to about ninety members, following which a business meeting and scientific session was held. A number of new members were voted in and a great deal of enthusiasm was shown by the members toward their county society and their state organization. They have one of the most enthusiastic county societies it has ever been my pleasure to visit. They have recently established a medical library and have subscribed to the Barlow medical library of Los Angeles so that the members can get reference books and magazines on a very short notice. The meeting was very enjoyable and was greatly appreciated by Dr. Kinney and myself.

The San Diego County Medical Society still maintains a high personnel of membership among the licensed physicians in the county. Regular meetings are held on the second Tuesday of each month at which time a dinner is served and a scientific program given. The attendance at these meetings runs from one hundred to one hundred twenty-five members regularly.

Respectfully submitted,  
Mott H. Arnold, *Councilor*.

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#### SECOND COUNCILOR DISTRICT

Los Angeles County

#### To the President and House of Delegates:

As Councilor for the Second District of the California Medical Association, I have no extensive report to make, but a few observations may be of interest.

At this date (April 4) I am informed that the paid membership for the year 1930, number 1550, with 247 delinquent which, I am informed, is about the average of delinquency at this date. Fifty-one new members have been admitted since January 1, 1930, and forty-eight are now listed as applicants.

It would seem from this information that there has been a gain in membership, though not a large one. Inasmuch as there are approximately 3,500 medical men and women in Los Angeles County eligible to membership in this organization, it would seem that the Association is not sufficiently active in its extension efforts.

It will be of interest to study the membership of the various branches and sections, all of which are active and are of value in their several spheres.

#### The Branches are as follows:

Alhambra .....	25
Glendale .....	51
Harbor Branch .....	98

\* In addition to the reports which follow, the Pre-Convention Bulletin contained the reports of the Council and other general officers. As those reports were read to the House of Delegates, they will be found in the minutes of the House, which follow.

Monrovia Branch .....	17
Pasadena Branch .....	100
Pomona Branch .....	39
San Fernando Valley Branch.....	26
Santa Monica Branch .....	56
Southwest Branch .....	14

426

It will be seen that these nine branches have a membership of 426—an average of 47 members.

#### The Sections are as follows:

Anaesthesia Section .....	64
Clinical and Statistical Section.....	135
Dermatology and Syphilology Section....	13
Eye and Ear Section.....	100
Industrial Accident Section.....	90
Internal Medicine Section.....	59
Obstetrical Section .....	71
Radiological Section .....	35
Surgical Section .....	130
Tuberculosis Section .....	85
Urological Section .....	27

809

The total membership of the sections is 809, with an average membership of 73 plus. Just what proportion are members of both branches and sections is not determined. These figures are furnished by the secretary of the County Association.

In the organization of the Association the Council is composed of nine Councilors-at-Large, each of whom serves for three years, and one Councilor comes from each Branch or Section and serves for one year. This plan worked very well when there were but two or three branches and two or three sections. Now twenty Councilors come in with inconsiderable experience or knowledge of the working or history of the organization, and in the nine regular meetings of the year (if they attend that many) they cannot acquire that knowledge of organization work which is really necessary for the needs and demands of this great association. Moreover after a year of service when these members have learned somewhat of the intricacies of the organization they pass out to be succeeded by others who in turn usually have only a limited knowledge of its organization needs and responsibilities.

The problems before organized medicine were never so great as they now are. Men and women who are sincere in their desire to maintain high standards in the profession of medicine must give their time, their thought and their strength to the solution of these problems for the betterment of mankind and for the preservation of professional honor.

The great difficulty is to interest our fellows in the importance of these official positions.

It is to be hoped that some plan of a closer and more powerful organization may be evolved in the near future.

The numerous meetings of sections, branches, hospital staffs and other special societies have had a most disastrous effect upon the general meetings of the County Association. Often when outstanding

speakers with big messages are presented there will be an attendance of not over one hundred fifty or two hundred. Dr. George Hunter, who was President of the Association last year, tells me that he believes the attendance did not average over fifty or seventy-five at the general meetings for that year. It is somewhat better this year, but nothing that it should be for this Association of 1,800 members.

This is regrettable for it is at the general meetings that the fellowship and community of interest is best fostered. This statement is not given in a spirit of carping criticism, but it is given in the hope that some plan may be devised for this Association and for all large ones in the State whereby a greater interest may be aroused. The small groups are liable to lose touch with their fellows of other groups, and the Association fall into a state of comparative inaction where important problems in policy and action arise.

Respectfully submitted,

William Duffield, *Councilor*.

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#### FOURTH COUNCILOR DISTRICT

Calaveras, Fresno, Inyo, Kings, Madera, Mariposa, Merced, Mono, San Joaquin, Stanislaus, Tulare and Tuolumne Counties

*To the President and House of Delegates:*

*Fresno County Society* is having regular meetings well attended. Membership is in good condition, the ratio being above the average. As elsewhere, they are having a great deal of discussion relative to the high cost of medical service (a special letter on this was sent the Council).

*San Joaquin County Society* is quite active in all departments. Good programs are being put on and attendance is good. At the last meeting they discussed local radio broadcasting. They were informed that that idea is being discussed by the Council. That county has been selected by the Wilbur Committee as one of the counties to use for survey purposes, and Dr. Sinai, Public Health Officer, representing the committee, is there now making the survey and coöperating with a committee from the Society.

*Stanislaus County Society* is active. Membership of eligible licentiates includes all but two men. Regular meetings are held and well attended. Most of the programs are given by outside men.

*Tulare County Society* is having regular meetings with good attendance but the membership is hardly so great as it should be, there being in the county 58 licentiates and a membership of only 37. The Society has inaugurated an annual joint meeting with the County Bar Association at which a program interesting to both professions is given. This seems an excellent idea as it brings the two professions in closer contact.

*Tuolumne and Merced* will be visited within the next ten days.

This comprises all organized societies in District No. 4.

Respectfully submitted,

Fred R. DeLappe, *Councilor*.

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#### FIFTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Clara and Santa Cruz Counties

The Santa Clara County Society, having the largest membership in the District, is carrying out the most extensive program, and has a very creditable attendance at meetings. The annual tri-county meeting, composed of Santa Clara, San Benito and Monterey

Counties, was held at Gilroy on September 18, and was well attended. The principal speaker of the evening was Dr. J. H. Woolsey, who spoke on the early diagnosis of gastric carcinoma.

Reports from the San Mateo County Society indicate the usual activity. A more detailed report will be possible after attendance of the meeting to be held on April 23.

Monterey County Society is showing a fair attendance at meetings considering the number of members. At the meeting held at Monterey on April 4, a unit of the Woman's Auxiliary was organized. This is the first unit in the Fifth District and appeared to start with considerable enthusiasm. The County Society is planning to lend every effort to make the Annual Meeting of the California Medical Association at Del Monte a memorable one.

The attendance of the Santa Cruz County Society during the past year has been somewhat erratic. The most recent meeting was held at Boulder Creek, and was addressed by Dr. Leo Eloesser on surgery of the thorax. The attendance was only fair.

Respectfully submitted,

A. L. Phillips, *Councilor*.

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#### SIXTH COUNCILOR DISTRICT

San Francisco County

*To the President and House of Delegates:*

The Sixth, or San Francisco District, reports progress for the year just closed. Interest in the scientific meetings has been well maintained.

Conferences held in past years led the society to believe it should own its own home. Accordingly the property at 2180 Washington Street, formerly one of the most beautiful homes in San Francisco, was purchased and is now occupied by the society.

It was first believed advisable to finance this home through voluntary pledges from the members, but during this year it has been the consensus of opinion among leaders of this organization that, to make the headquarters democratic in ownership, all members should have the privilege of assisting in financing this undertaking and each and every member should know the pride of ownership. Therefore the society increased the dues so that in a few years the San Francisco County Medical Society will own, outright, one of the finest county society homes in California.

We believe the House of Delegates should commend the activities of the officers and the committees of the San Francisco County Society who have done such hard work during the past year. This accomplishment should serve to stimulate all other units of our state society to similar efforts.

Respectfully submitted,

W. B. Coffey, *Councilor*.

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#### SEVENTH COUNCILOR DISTRICT

Contra Costa and Alameda Counties

*To the President and House of Delegates:*

The Seventh Councilor District contains Contra Costa and Alameda Counties.

Contra Costa County covers a large territory. In order to make it possible for all doctors to attend the meetings of the society, different towns are selected for each meeting. The Woman's Auxiliary has organized in Contra Costa County during the last few months and meets at the same time as the county society although not in the same place. After the scientific program the doctors are usually invited to



partake of light refreshments by the auxiliary. In discussing the problem of the cost of medical care, it was found that rural districts do not feel the need of any drastic changes.

Alameda County has a well-organized county society and holds interesting, well-attended meetings. At several of the meetings during the past year, eastern speakers have addressed the members. Approximately two-thirds of the eligible physicians in Alameda County belong to the medical society. During the year twenty-nine new members have been taken into the society. The question of medical service has been discussed at length by the members both at the meetings of the society and at the various staff meetings, but as yet no solution of the problem has been evolved.

Respectfully submitted,

Oliver D. Hamlin, *Councilor*.



#### EIGHTH COUNCILOR DISTRICT

Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo and Yuba Counties

*To the President and House of Delegates:*

As Councilor of the Eighth District I beg to submit the following report on some of the counties in my district:

Yuba-Sutter Medical Society is in very good condition. There has been more interest shown in the Society by the members in the past year than there has been for many years back. Their meetings are regular, on the second Tuesday of each month, and they have very good programs; outside speakers, as a rule, with a get-together and luncheon following the scientific meeting. I have visited there often and my official visit comes next Tuesday, April 8, 1930, at which time Dr. Karl Meyer of the University of California will be the speaker. Yuba-Sutter now has sixteen members, two have been added to their roster during the year.

Tehama County Medical Society has eleven members. They have no regular time to meet, but meet at the call of the chairman and then only a few respond. I am arranging with Drs. Bailey and Bly for a meeting in the near future.

Yolo-Colusa County Medical Society is in very good condition, meets quarterly, the next meeting being held this summer. They have most interesting meetings.

Glenn County Medical Society has considered uniting with the Yolo-Colusa County Medical Society. I have asked Dr. Brown, Secretary, about what steps have been taken in the proposed amalgamation, but have not heard from him.

I am to visit the Butte County Medical Society next month. Visits to the Shasta and Lassen-Plumas County Medical Societies will be made in the summer.

Nevada-Placer County Medical Society is in very good condition, having regular meetings which are well attended. Dr. Robert Peers will report on this Society as he has done in the past.

Respectfully submitted,

J. B. Harris, *Councilor*.



#### NINTH COUNCILOR DISTRICT

Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma and Trinity Counties

*To the President and House of Delegates:*

A brief report of the Medical Society's action in the Ninth Councilor District is submitted.

During the past year the custom of joint society meetings inaugurated in 1928 has been continued, thereby increasing interest and attendance at the society gatherings. Napa, Sonoma, Marin and Solano societies, have had two of these joint meetings, gathering for a seven o'clock dinner and social hour followed by a scientific paper, or symposium, then a business session where the various problems facing the profession were freely discussed.

In May, the Napa, Solano and Sonoma societies were the guests of Dr. Max Rothschild at this annual party, where the members enjoyed a luncheon, afternoon of golf, then dinner, followed by a scientific program.

These get-together joint meetings are enjoyed and the good fellowship displayed has resulted in an improved friendly spirit among the physicians of the different communities.

The Sonoma society organized an auxiliary and at the March meeting we were surprised to find instead of the usual sixteen to twenty members present, that forty-eight physicians and wives were gathered about the dinner table. Later the ladies withdrew to hold their meeting and played bridge. The society conducted its usual meeting.

On April 3, at the Ramona Gardens, Napa Society entertained the society and auxiliary of Sonoma County at a dinner, after which an auxiliary was formed for the Napa Society.

Messrs. Hartley Peart and C. Sullivan both delivered excellent papers on Economics and Medico-Legal Phases of Medical Practice. This meeting was attended by several of the naval surgeons from Mare Island and they were so pleased at the spirit displayed that they have requested invitations to be mailed the hospital of other society gatherings that they may participate in the enjoyment of these pleasant and instructive medical meetings.

It has been impossible for me to visit the Humboldt County Society during the past year, as this trip requires two entire days and this time could not be spared at the dates of the meetings.

The ninth district is large and difficulty is found in arranging one's practice to attend both Council and Society meetings, though we are endeavoring to the best of our ability to contact each Society.

Respectfully submitted,

Henry S. Rogers, *Councilor*.

#### REPORTS OF STANDING COMMITTEES\*

##### COMMITTEE ON ASSOCIATED SOCIETIES AND TECHNICAL GROUPS

*To the President and House of Delegates:*

Herewith find report of the Committee on Associated Societies and Technical Groups:

The wording of Section 16 of Chapter 5 of the new by-laws indicates that this committee would have a very large contract before it in case it tried to cover its entire domain during any one calendar year. It should be possible, nevertheless, to make progress if one after the other of its functions is given attention.

1. During the last year the particular task before the committee was to aid in the organization of county woman's auxiliaries. It is gratifying to report that up to the time that this report is made that a county woman's auxiliary has been formed in the following counties:

\* Members of Standing Committees are urged to meet during the Annual Session and organize for the coming year and to hold at least one regular meeting of their respective committee during the Annual Session.

Contra Costa, Kern, Los Angeles, Orange, San Bernardino, Sonoma and Monterey.

A letter has gone forward from your committee to each county medical society urging the officers of each county unit to get in back of this woman's auxiliary work. Such an auxiliary organization can be made to develop into a very strong adjunct of the California Medical Association, but its influence will be greatest in proportion as its membership represents a fair cross section of the state. A leaflet on organization of woman's auxiliaries has also been compiled by a member of the committee, Doctor Kress, and is being used in the further development of county auxiliaries.

2. In the event of a decision of the House of Delegates in favor of a basic science act, it is quite possible that the coöperation of the professions of dentistry, pharmacy, and perhaps even of optometry, might be enlisted in an effort to have each of those professions also come under the domain of a basic science act which would demand a high school education and a knowledge of certain fundamental subjects before the final examination for a special or professional license could be taken.

3. Coöperation and good understanding with technical groups such as x-ray technicians, laboratory technicians, etc., is in itself a tremendously big problem. The California Medical Association several years ago attempted to solve this problem, but with the passing of years was obliged to give up the semi-intimate relationship that had been provided.

4. This committee would suggest that it would be very desirable for the California Medical Association to establish the custom of appointing official delegates to the annual sessions of the state medical societies of the commonwealths which border California. Such official delegates could be chosen from the members of the C. M. A., one or more of whom are nearly always on the program of such neighboring state medical associations.

It is true that such an appointment would be little more than a gesture of good fellowship and yet after all it is through such expressions of good fellowship that better understanding and more united effort come into being.

5. It is interesting to note that the need of a good understanding between the learned professions has made itself manifest to such extent that in California a "League for the Preservation of Professional Rights" came into existence during the last year, and said League consists of members of the professions of medicine, dentistry, law and pharmacy.

The object of that League is to promote coöperative effort in all endeavors to maintain the educational and professional standards and privileges and rights of those four professions.

In the year to come it is hoped that this Committee on Associated Societies and Technical Groups will be able to continue its activities along lines indicated somewhat briefly above and to be able to make a report of continued progress at the 1931 Annual Session of the California Medical Association.

Respectfully submitted,

COMMITTEE ON ASSOCIATED SOCIETIES AND  
TECHNICAL GROUPS,

William B. Bowman, *Chairman*  
George H. Kress  
Harold A. Thompson

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#### COMMITTEE ON EXTENSION LECTURES

*To the President and House of Delegates:*

The Committee on Extension Lectures appointed at the last meeting of the California Medical Association,

namely, Robert T. Legge, Berkeley, chairman; James F. Churchill, San Diego, and Robert A. Peers, Colfax, have not been able to hold personal conferences due to the fact that their residences are in such various parts of the state.

It is the aim of the chairman to call a special meeting at the coming Del Monte convention.

At this conference it is our purpose to discuss ways and means for improving the Extension Lecture service. We shall attempt to get in touch with various secretaries of county units to determine the need and value of this service and to improve the same by adding new lecturers in the various fields of medicine.

It is our hope to add to this group of lecturers men who are doing original research in the basic medical sciences, public health, medical economics and jurisprudence.

Our great universities have from time to time foreign scholars who are exchange professors and who are brought to this country for special lectures and research.

We believe the Extension Committee should keep the secretary of the Society posted when these distinguished visitors are here in our state with a view to ascertaining if they are available to talk on their particular subjects before the various societies. This, of course, would apply more particularly to our larger cities in proximity to the universities.

At the present time there are various agencies, such as the Eastman Kodak Company, which can furnish at small rental extraordinary films on special subjects relating to medical science. It is the hope of the committee that a list of the subjects will be available and placed in the hands of the secretary of the Society.

Respectfully submitted,

COMMITTEE ON EXTENSION LECTURES,

Robert T. Legge, *Chairman*  
James F. Churchill  
Robert A. Peers  
The Secretary, *ex-officio*

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#### COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

*To the President and House of Delegates:*

Your committee on Health and Public Instruction, appointed after the Coronado meeting and made up of three members located at widely separated points in the state, has had no opportunity to meet, and very little correspondence has been exchanged because of our unanimous feeling that until the duties of the committee were more clearly defined by the Council of the Association, there was nothing for us to do.

The only official act of the year was a letter furnishing information to one Dr. Theodore Toepel of Atlanta, Georgia, upon the activities of the California Medical Association in instructing the lay public on matters of health.

The committee feels that the problem of educating the lay public is an important one, made particularly difficult by the fact that no fund is appropriated for the purpose, but, if financial support can be obtained, offers the following suggestions:

*First:* Broadcasting from one of the powerful stations in either Los Angeles or San Francisco. The material offered should be of such a type as to hold the attention of the radio audience and not a fixed lecture on hygiene from which most listeners on the air will quickly turn.

*Second:* Properly censored newspaper articles on health topics appearing weekly and sponsored by the local medical society.



*Third:* Popular semi-scientific lectures to the lay public.

*Fourth:* The establishment of health programs in the local high schools illustrating particularly the problems of infectious diseases.

*Fifth:* Circularizing the laity by the aid of retail drug stores. Short, pointed articles furnished by the medical association to be wrapped with purchases.

All of these activities should be under the direct supervision of the local medical society without the identity of any individual being made known.

Respectfully submitted,  
COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION,  
Gertrude Moore, *Chairman*  
Fred B. Clarke  
Henry S. Rogers

COMMITTEE ON HISTORY AND OBITUARIES  
*To the President and House of Delegates:*

The committee on History and Obituaries of the Association begs to report that during the fourteen months from January 1, 1929 to February 28, 1930, with a membership of 4,854, eighty-one deaths have been reported as follows:

Deaths Reported from January 1, 1929, to January 1, 1930	
	County Society
Abbott, Philip.....	Alameda
*Anderson, Jennie H.....	San Francisco
Ainsworth, Frank Kenley.....	San Francisco
Aiken, Ilo R.....	Alameda
Berndt, Richard M. H.....	San Francisco
Brunig, Henry Daniel.....	Los Angeles
Berry, Stanley Francis.....	Alameda
Buckingham, Henry Proctor.....	San Francisco
Blair, James C.....	Santa Clara
Browning, Frederick W.....	Alameda
Bullock, Newell H.....	Santa Clara
Brodrick, Richard George.....	San Francisco
Cipes, Joseph S.....	Los Angeles
Coates, Benjamin O.....	Los Angeles
Cowan, John Francis.....	San Francisco
Cleverdon, Ernest.....	San Diego
Crabtree, Hezediah T.....	San Francisco
Clark, Fred Pope.....	San Joaquin
DeLoss, Herbert.....	Alameda
Emmal, F. S.....	San Francisco
Franklin, Blake.....	Santa Clara
Pottrell, Michael J.....	San Francisco
Foster, Ralph de Lecaire.....	San Diego
Gross, Louis.....	San Francisco
Gardner, John Melvin.....	Santa Cruz
Goetz, Alice L.....	Santa Barbara
Haake, Chas. H. G.....	Shasta
Hamlin, Francis Allen.....	Kern
Howell, Ernest T. D.....	Los Angeles
Huntington, Thomas W.....	San Francisco
Hagen, John Chas. Edward.....	Los Angeles
Holsclaw, Florence Mabel.....	San Francisco
Haggart, Fred Stuart.....	Los Angeles
Jackson, Paul Kingsley.....	San Luis Obispo
Jacobs, Edward H.....	Los Angeles
Jones, William Farrington.....	Marin
Kelsey, Arthur Louis.....	Los Angeles
Koons, Henry Hagus.....	Los Angeles
Leisenring, Luther M.....	Solano
Maggs, Frederic G.....	San Joaquin
*Magee, Thomas L.....	San Diego
Mohun, Chas. Constantine.....	San Francisco
McKinnon, Wilfred Chas.....	San Francisco
Maine, Alva Frank.....	Alameda
Martin, Hugh Ralph.....	Riverside
McGee, Harry Stowe.....	Los Angeles
Miller, Ulysses Grant.....	Los Angeles
Morris, John Knox.....	Stanislaus
Mott, George Hervey.....	Monterey
Martin, Jean Marion.....	San Francisco
Munroe, Harrington Bennett.....	Los Angeles
Newton, Frances Louise.....	Yolo-Colusa
Nutting, Chas. Wilbur.....	Siskiyou
O'Brien, Aloysius Paul.....	San Francisco
Oliver, John Edward.....	San Joaquin
Royer, Daniel Franklin.....	Orange
Ritchie, Adam Marsden.....	Monterey
Reed, Clarence E.....	Shasta
Reynolds, Clyde G.....	Siskiyou
Stein, Frederick L.....	San Francisco
Scroggs, Gustavus A.....	Los Angeles
Six, Clarence Logan.....	San Joaquin
Sweeney, George J.....	San Francisco
Smith, J. Wesley.....	Los Angeles

\* Affiliate member.

	County Society
Shiels, John Wilson.....	San Francisco
Simpson, Frank W.....	Alameda
Tate, C. Frances S.....	Los Angeles
Trew, Niel Charles.....	Los Angeles
Thompson, Roy Oliver.....	Imperial
Tebbe, William Edward.....	Siskiyou
Townsend, Vinton Ray.....	Los Angeles
Williams, Fred H.....	Fresno
Ward, Edwin Davis.....	Los Angeles
Werner, Carl Otto Eduard.....	San Francisco
Wells, Kathryn Gunby.....	Los Angeles
Yates, William Charles.....	Monterey
Young, J. Audley.....	Stanislaus
Zbinden, D. B.....	Los Angeles

Deaths reported from January 1, 1930, to February 28, 1930	
	County Society
Beckwith, Ward M.....	Alameda
Draper, Alfred Lawrence.....	San Francisco
Scholl, Marguerite.....	Los Angeles

During these fourteen months fifteen Obituaries have appeared in the official organ, CALIFORNIA AND WESTERN MEDICINE.

*History of State and Local Associations:*

On this subject we beg to suggest the following for consideration:

1. That every County Medical Society be requested to appoint a committee to compile a history of the organization and that a copy of the same be sent to the California Medical Association for preservation in the historical archives of the same.
2. That the C. M. A. itself through its standing committee compile a history of the State Society to be printed in one of the annual directories or in a separate volume.
3. That the C. M. A. through its standing committee on history endeavor to interest the State Board of Health in compiling a history of its organization and development, the same to be published with the C. M. A. history.

We urge that the Association actively follow out these suggestions.

Respectfully submitted,  
COMMITTEE ON HISTORY AND OBITUARIES,  
Charles D. Ball (*Chairman*),  
Percy T. Phillips,  
Emmet Rixford,  
The Secretary, *ex-officio*,  
The Editor, *ex-officio*.

COMMITTEE ON HOSPITALS, DISPENSARIES AND CLINICS

The report of this committee, consisting of Doctors John C. Ruddock, Walter B. Coffey and Gayle C. Moseley, will be printed in the July issue of CALIFORNIA AND WESTERN MEDICINE. This report covered a somewhat comprehensive survey made under the supervision of Dr. John C. Ruddock.

COMMITTEE ON INDUSTRIAL PRACTICE

*To the President and House of Delegates:*

The chairman of the Industrial Medical Practice Committee reports that nothing of special interest with reference to industrial medical practice has come up during the year. A summary of all work done by the committee will be presented at the annual session.

Respectfully submitted,  
COMMITTEE ON INDUSTRIAL PRACTICE,  
Gayle G. Moseley (*Chairman*),  
Packard Thurber,  
Walter B. Coffey.

COMMITTEE ON MEDICAL ECONOMICS

This committee consists of Doctors John H. Graves and Ruggles A. Cushman. A full report outlining the facts gathered in a survey made by Dr. John H. Graves will appear in the July issue of CALIFORNIA AND WESTERN MEDICINE.

## COMMITTEE ON MEDICAL DEFENSE

*To the President and House of Delegates:*

For years the California Medical Association without special charge other than the regular Association dues, furnished legal defense to any member who was sued for alleged malpractice. Adverse judgments, under this system, were paid by the individual member.

In addition to this legal defense, on December 7, 1916, for a group who wished financial protection also, an Indemnity Defense was instituted. On payment of \$30, members were given not only legal defense but protection against adverse judgment up to \$5,000. That on so small an assessment this protection was carried for seven years, was due, doubtless, to the amazing record that no adverse judgment was rendered during that time, though a few just settlements were made out of court. Mounting costs necessitated an additional assessment of \$10 in 1922.

Though the financial condition of the Indemnity Defense Fund was sound, the steadily mounting court costs and vastly increased sums sought in judgment, moved the House of Delegates in May of 1922 to adopt a resolution which directed the Council to terminate Legal Defense as of June 30, 1924, and Indemnity Defense as of November 30, 1923.

To provide for those members who desired it, the Medical Society of the State of California was organized and an Optional Defense, effective July 1, 1924, at a figure commensurate with changed conditions, was instituted.

The coverage offered the members of the California Medical Association through membership in the Optional Defense (as it is commonly called), closely resembles the early legal defense, the principal difference being that insurance through a commercial company to cover court costs and indemnity against adverse judgments is a condition precedent to membership. Optional Defense gives the service of the legal counsel of the Association and also of the group of associates who have been trained through years of activity in behalf of the members of the California Medical Association and who have an expert understanding of the problems which confront the physician who is sued for alleged malpractice—problems that involve finance and reputation both.

The injustice of taxing all members for a service accorded to a minor group underlies the yearly assessment of \$10 set by the trustees of the Society for this service. On December 30, 1929, seven hundred members had secured Optional Defense coverage. The fund resultant upon the \$10 assessment is used to carry the costs of legal service only. Since December 1, 1924, seventeen claims and twenty-two cases have been disposed of; eleven claims and twenty-nine cases are now pending. Approximately, therefore, one in ten of the seven hundred members covered have faced the unpleasantness of suit.

The duties of your committee on Medical Defense are outlined in the Constitution and By-Laws as follows:

"The Committee on Medical Defense, subject to the approval of the council, shall prepare plans and establish rules for the protection of the legal rights of members of this Association against whom suits for alleged malpractice are brought.

"It may assist in the defense of any member sued for alleged negligence if the member was in good standing and had complied with the rules of the council when the service on account of which suit was threatened or brought was rendered—provided

that the committee determines that the position of the member merits such action."

Your committee finds that the Medical Society of the State of California, providing Optional Defense for those who desire and pay for it, has established rules for the protection of the legal rights of members of this Association interested, and strongly commends the service now furnished by Optional Defense. The committee in particular is pleased to thoroughly endorse and approve the work of the legal representatives of the Association in their defense of our members as shown by the annual reports of the Legal Department. They recommend that the trustees of this Society, the officers and councilors of the Association, and the members of the House of Delegates, and the various County Society officers bring to the attention of the members, this defense that is now available and encourage continued enrollment therein.

Respectfully submitted,

COMMITTEE ON MEDICAL DEFENSE,

George G. Reinle, *Chairman*

J. L. Maupin, Sr.

Mott H. Arnold

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## COMMITTEE ON MEMBERSHIP AND ORGANIZATION

*To the President and House of Delegates:*

In accordance with Section 7, Chapter 5, of the Constitution and By-laws of the California Medical Association, your Committee on Membership and Organization begs to submit the following, the first annual report of this committee.

According to the Directory of the Board of Medical Examiners for 1929 there were 8,974 physicians in the State of California holding certificates to practice medicine. There were 1,720 outside the State of California holding certificates, making a total of 10,694.

December 1, 1930, there were 4,854 doctors who were members of the California Medical Association. This committee realizes that there are many physicians out of this 5,840 nonmembers who are eligible to become members and should be enlisted.

Your committee has sent a letter to the president and secretary of each component society of the state asking that a membership committee be appointed to endeavor to enlist as members those eligible within the boundaries of their territory and who are not members at the present time. However, the component societies were cautioned against lowering the standards for membership in their society. We have had to date replies from twenty-three of the component societies notifying us that such committee has been appointed. In fact, Los Angeles and San Francisco counties have had for some time such a committee functioning. We expect ultimately to receive similar responses from the remaining component societies, as the letter was sent only a short time ago and we are receiving replies daily.

This committee regrets that they have been unable to hold a formal meeting and have communicated by mail only. However, we expect to hold a meeting during the coming annual session of the Association and formulate a working plan with the view of making possible a more definite and quantitative report in 1931.

Respectfully submitted,

COMMITTEE ON MEMBERSHIP AND ORGANIZATION,

LeRoy Brooks, *Chairman*

Harlan Shoemaker

Jesse W. Barnes



# COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS

*To the President and House of Delegates:*

Owing to the fact that the members of the standing committees were not notified of their appointment until after the last annual session at San Diego, it was not possible for members from widely separated cities to hold an organization conference. Thursday, May 1, has been set for such organization meeting at the Del Monte session.

The Committee on Medical Education and Medical Institutions has no other report to submit.

Respectfully submitted,

COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS,

George Dock, *Chairman*  
H. A. L. Ryfkogel  
George G. Hunter

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# COMMITTEE ON PUBLICATIONS

*To the President and House of Delegates:*

Your committee was unable to organize at the San Diego annual session of 1929 due to the fact that the new by-laws which brought it into existence were not adopted until that session. Therefore, only a tentative report will be here submitted.

There are three official publications provided for in the Constitution and By-laws of the California Medical Association: The official journal, CALIFORNIA AND WESTERN MEDICINE; THE ANNUAL DIRECTORY, and THE PRE-CONVENTION BULLETIN. Of these three the PRE-CONVENTION BULLETIN will make its first appearance at the Del Monte meeting of this year.

Your committee further begs leave to submit the following suggestions concerning the aforementioned publications:

1. CALIFORNIA AND WESTERN MEDICINE, the official journal of the California Medical Association is undoubtedly in the very front rank of State Medical Society publications. This is true both as to its form, the nature of the subject matter and its general tone. Concerning it our committee has neither criticism nor suggestion because we believe the editors have succeeded in bringing into being an official journal admirably adapted to the needs of the members of the California Medical Association and at the same time much esteemed by members of our profession generally throughout the country.

2. Concerning the ANNUAL DIRECTORY, it is our belief that this should contain not only a list of the names of the members grouped by counties so as to permit easy comparison with the same arrangement of doctors of medicine in different counties as brought out by the California State Board of Medical Examiners, but also it should contain some general information necessary to the well-being of our beloved profession, to wit:

(a) We would suggest in addition to standing information in the last edition that in the next Directory there be incorporated "The Rules and Principles of Professional Conduct," either in form and substance as brought out by the American Medical Association or as brought out by the New York Medical Society.

(b) The New York Medical Society in its Directory also prints the Hippocratic Oath in a leaflet containing its Principles of Professional Conduct. To our minds it would be an excellent thing to incorporate the Hippocratic Oath in our Directory. To this may be added other great words of noted physicians concerning professional conduct, etc.

(c) To our minds a digest of malpractice laws, together with words of caution and advice which all medical men should possess will be invaluable.

(d) An additional item would be a brief one-page notice concerning the Woman's Auxiliary of California.

3. The PRE-CONVENTION BULLETIN. We are heartily in favor of the Pre-Convention Bulletin and believe that if it be properly conducted it can be made of real value to the California Medical Association. It will give the members of the House of Delegates a much better idea of the problems and needs of the State Association than would otherwise be possible and in that manner would make for more efficient procedure and action by the House of Delegates.

A Pre-Convention Bulletin would also perform a great service in making it possible to have every standing committee do its work in due form and order during each year. The standing committees which fail to make a report according to the new by-laws are subject to change in their membership and rightly so.

It is our belief that it may take several years before the full value of this Pre-Convention Bulletin will be appreciated. Once, however, it has had a fair trial we are certain that the members of the Association will be more than convinced that money expended thereon will have done most excellent service.

Respectfully submitted,

COMMITTEE ON PUBLICATIONS,

Percy T. Magan, *Chairman*  
Frederick F. Gundrum  
The Secretary, *ex-officio*  
The Editor, *ex-officio*

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# COMMITTEE ON PUBLIC POLICY AND LEGISLATION

*To the President and House of Delegates:*

The following annual report of the Committee on Public Policy and Legislation is respectfully submitted to the House of Delegates:

*Pending Legislation:* Your committee has had under consideration many bills which have been drafted from various sources and which are to be submitted to the coming Legislature, viz., a proposed amendment to the dental law permitting dental surgeons to prescribe veronal, barbitol or any of its salt derivatives, etc.; a bill proposed to establish a state medical library; legislation relative to the education and training of nurses in an accredited school of nursing; a bill proposing the establishment of a State Board of Examiners for nurses.

Your committee has acted upon federal legislation wherein bills have been introduced before Congress to create in the Treasury Department a Federal Bureau of Narcotics and to empower the Federal Commissioner of Prohibition to license physicians for prescribing of narcotics and for the suspension and revocation of these licenses by the Federal Commissioner of Prohibition. We have also considered federal legislation before Congress on the cancellation of the yearly allotment of medicinal liquor for the emergency use of doctors; also federal action brought out in the government's Bosch Magneto suit, relative to an alleged attempt to cripple the American dye industry in behalf of the German dye monopoly. Your committee has taken action on the federal bill to prohibit experiments upon living dogs in the District of Columbia and providing a penalty for violation thereof.

Your committee has given intensive study to the proposed Basic Science Law of the State of California as related to the operation of the Medical Practice Act and has also considered at length certain phases of the economic problems of our members and a plan for rendering medical service to the so-called "white collar brigade."

Your committee has considered and discussed certain features concerning the advisability of possible revision of the California Medical Practice Act and has also taken up matters relating to the inauguration



of an eight-hour schedule for special nurses. Your committee has had submitted to it items concerning the wage earners' bankruptcy procedures and has discussed the desirability of a California law safeguarding the medical profession in matters of this kind and has discussed proposed amendments to the present laws relative to medical expert testimony and many other matters that may be presented at the coming legislature.

Your committee wishes to quote from an editorial in CALIFORNIA AND WESTERN MEDICINE bringing your attention to the fact that the year of 1930 is a state election year.

*"The Year 1930 Is a State Election Year.*—This caption is presented to remind us of our individual civic obligations to be interested in the complexion of the next state legislature, many of whose assembly and senate members will be elected in the fall of 1930. These particular lay fellow citizens who will have legislative powers should be contacted with at an early day and an intelligent effort made to acquaint them with the viewpoints of physicians as regards maintenance of proper standards in medical licensure and in public health activities. It is not fair to criticize members of the assembly and senate when they vote in opposition to the maintenance of such standards if we have made no previous attempts to acquaint them with some of our problems which may come before them, and to inform them why we hold certain opinions thereon. The medical profession does sufficient service in the protection of the public health of California to merit careful consideration of its viewpoints. Legislators will be found to be glad to give such consideration if proper contacts are made from the beginning. Every member who knows a state assemblyman or state senator or a prospective state assemblyman or senator may well cultivate such acquaintanceship or friendship, for it later on might be of real value in the protection of public health interests. In responsibilities such as this every member of the California Medical Association can be of service. The officers of the Association can only act for and speak in behalf of their fellow members."

Respectfully submitted,

COMMITTEE ON PUBLIC POLICY AND LEGISLATION,

Junius B. Harris, *Chairman*  
William Duffield  
Joseph Catton  
The President, *ex-officio*  
The President-elect, *ex-officio*

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COMMITTEE ON SCIENTIFIC WORK

*To the President and House of Delegates:*

The program printed in the April issue of CALIFORNIA AND WESTERN MEDICINE and reprinted for distribution at each annual meeting is the most tangible evidence of the work which is yearly done by section officers and the Arrangements and Program committees. Section officers take up active work immediately after an annual session, outline the program that is desired for the various meeting days and hold conferences in some instances with other section officers to arrange with them for a union meeting of two or more sections. At these union meetings topics selected for consideration can be presented from the viewpoints of the several specialties represented.

These combined meetings have much in their favor. They secure larger audiences for their speakers; papers there presented are read before a group who are not all equally familiar with the subject, as is the case when one pathologist addresses his pathological section often attended largely by fellow pathologists. It is hoped that other sections may find such union programs as advantageous as have surgery and pathology, pediatrics and general medicine during this present session.

Four invited speakers have come from distant cities to address the general sessions. They will also speak before the sections of their respective specialties. Much of the interest of the annual session centers around the messages brought by these guest speakers. This year we have been favored by McKim Marriott of the Washington University, Fred Weidman of the University of Pennsylvania, George Curtis of the University of Chicago, and A. U. Desjardins of Mayo Clinic.

The so-called program meeting held regularly late in January not only fixes a definite closing date for the completion of every section program, but permits a review of all section and general programs. It is our hope to be able to submit mimeographed copies of section programs to all section officers some days prior to the meeting of the Program Committee that comment thereon may be more helpfully critical even than heretofore.

The chairman of the Committee on Scientific Program invites constructive criticism for the betterment of this most important work of the Association. CALIFORNIA AND WESTERN MEDICINE is made up largely of material presented before the annual meeting. That which raises the standard of one, raises also the standard of the other; and the worth of the California Medical Association to the outside world is in large part judged by the worth of its medical journal.

Respectfully submitted,

COMMITTEE ON SCIENTIFIC WORK,

Emma W. Pope, *Chairman*  
Karl Schaupp  
Lemuel P. Adams  
Robert V. Day  
Ernest H. Falconer  
Sumner Everingham

## REPORTS OF SPECIAL COMMITTEES

### REPORT OF THE SPECIAL COMMITTEE ON REVISION OF MEDICAL PRACTICE ACT AND OF A POSSIBLE BASIC SCIENCE ACT

*To the President and House of Delegates:*

At the 186th meeting of the Council, held on September 28, 1929, a special committee of nine members, composed of three subgroups, one for the San Francisco Bay region, one for the Los Angeles region, and one At Large, was appointed, with instructions to consider possible amendments for revision of the Medical Practice Act of California, and of a possible basic science act of California. . . .

Inasmuch as the next California legislature will convene in January 1931, it is important that the members of the California Medical Association, through its House of Delegates and constituted officers, should determine what changes, if any, are desirable in these two legislative matters.

#### 1. *As Regards the Medical Practice Act of California:*

The present Medical Practice Act of California may be said to have been slowly and somewhat laboriously evolved. It is probably true that its basic requirements could be put in much clearer form, but if an attempt were made to do this through new legislation every such change would be susceptible of attack in the courts. As the law now stands, its basic conditions have been tested out up to the Supreme Court of California during the last two decades. Your special committee, therefore, felt it desirable to attempt no radical revision at this time and so recommended.

One recommendation for an amendment which is submitted for consideration is that which has to do with a requirement that would make it necessary for all recent graduates holding the M.D. degree to have at least one year of internship or similar experience before being eligible to take the examination for a license to practice in California.



At the present time the three California undergraduate medical schools—the State University, Stanford University, and the College of Medical Evangelists, each make such a year of internship necessary before granting the M.D. degree. Until their graduates receive this M.D. degree, they are not eligible to take the examination of the California Board of Medical Examiners. However, a goodly number of recent graduates come into California from eastern schools who receive their M.D. degree at the end of their four years of professional training, and these eastern graduates can take the examination for a license while they are serving internships in a California hospital, and are thus in position to get an earlier start in private practice than are our own California graduates of practically the same year of graduation.

Your special committee submits that it would be very proper that eastern graduates holding the M.D. degree should not be permitted to have an advantage over California graduates of the same year, and it is proposed to submit an amendment to cover this point. . . .

## 2. *As Regards a Possible Basic Science Act:*

It may be taken for granted that lay citizens who are interested in the maintenance of public health standards are in accord with the viewpoint of members of the medical profession, when our profession insists that no person from any school of healing whose graduates seek licensure privileges of California, should receive a license as a practitioner of the healing art, unless such person possesses an adequate amount of preliminary education, in addition to what may be termed his purely professional training. It may also be assumed that a four-year high school education in the way of preliminary training ought to be a very minimum of such preliminary credits; and that the State of California should give no licenses in the future to a person having any form of healing arts doctorate degree, unless such person has had at least a four-year high school education or its equivalent.

A basic science act such as is proposed would demand such a four-year high school education or its equivalent as its basic requirement and, in addition, proficiency in certain other basic studies of collegiate grade.

In the basic science act under consideration it is provided that the examination in these basic sciences must not necessarily be taken before matriculation into a medical school, but may be taken at any time prior to the examination to secure a license in any school of healing art, thus eliminating scholastic hardships or wastage of a year to an applicant not having the full education at the outset.

The determination of what these preliminary or basic science subjects to healing art practice are has given rise to much discussion. One of the subgroups of your special committee recommended as such basic subjects: English, chemistry, physics, and biology. It will be noted that three of the just mentioned four subjects are practically ignored in the curriculum in a medical or other school of the healing art.

Some basic science laws provide subjects such as anatomy, physiology, bacteriology, hygiene, and even pathology. The point made against the inclusion of such subjects is that knowledge in these subjects could be acquired in the regular healing art or professional courses, and that such examination would simply create duplication and dissatisfaction. As regards English, the fact was brought out that recent experiences of the California Board of Medical Examiners had shown that much of the board's special troubles with applicants for licensure has to do with applicants who have not a good command of English.

As to the make-up of the examining board in basic sciences, it has been suggested that there should be a board of five members, one each nominated by the presidents of the following California universities

from their nonhealing art faculties: the University of California, Stanford University, Santa Clara University, University of Southern California, the California Institute of Technology.

It could be reasonably assumed that a board of examiners so selected would be composed of able men who would be above reproach as to integrity or bias.

It is held by those who are believers in a basic science act that such a basic science act could be made a powerful means of preventing the organization of new cultist schools of the healing art in California. When one remembers that in a recent five-year period some four hundred M.D. graduates received licenses to practice in California, while during the same period some two thousand practitioners from one cultist group received licenses to practice side by side with these M.D. graduates, one can appreciate what the effect of distributing so large a number of cultist doctors must necessarily have upon the lay mind and upon healing art practice in general. The regular profession has no special quarrel with these cultist physicians and is willing that they should stand or fall on their own merits or demerits.

Practitioners of sectarian medicine should not seriously object to a basic science act for California. Nonsectarian or regular practitioners would support such a basic science act because it would work for the elevation of public health standards. Sectarian practitioner groups ought also to have that attitude. In addition, many of these cultist practitioners would probably be glad to see the enactment of a law since it would prevent too great an ingress into California from other states of undesirable members of their own schools.

The suggestion has been made that it might be desirable to substitute for the term "Basic Science Act," the term "Qualifying Certificate Law." This term "Qualifying Certificate" is one that is used in Canada and in Britain. The phrase or term has many things to commend it. Lay citizens and also many members of the medical profession would get a much more rapid and better understanding of what this law was intended to do if it were spoken of as a "Qualifying Certificate Law" than they would if it were referred to as a "Basic Science Act." We believe the suggestion is worthy of serious consideration.

It is quite possible that such a basic science act, if decided upon, should be presented not as a legislative but as an initiative law. . . . This preliminary report is submitted to call attention to some of the points involved in these questions.

Respectfully submitted,

SPECIAL COMMITTEE ON POSSIBLE REVISION OF THE MEDICAL PRACTICE ACT AND BASIC SCIENCE ACT:

### By I. BAY REGION GROUP

Morton R. Gibbons, *Group Chairman*  
Oliver D. Hamlin  
T. Henshaw Kelly  
Emma W. Pope  
Walter B. Coffey  
Joseph Catton  
Langley Porter  
William Ophüls  
Hartley Peart

### By II. LOS ANGELES GROUP

George H. Kress, *General Chairman*  
Percy T. Magan, *Group Chairman*  
Lyll C. Kinney  
William Duffield  
William Cutter  
William Molony

### By III. AT LARGE GROUP

Junius Harris, *Group Chairman*  
Percy Phillips  
Charles Pinkham  
Frederick Gundrum



## HOUSE OF DELEGATES

### Minutes of the Fifty-Ninth Annual Session of the House of Delegates of the California Medical Association

#### First Meeting

Held in the Copper Cup Room, Hotel Del Monte, Del Monte, California, Monday, April 28, 1930 at 8 p. m.

**I. Call to Order.**—The meeting was called to order by the speaker of the house, Edward M. Pallette of Los Angeles.

The president, Morton R. Gibbons of San Francisco addressed the House stating that two new plans would be inaugurated at this session—the Pre-Convention Bulletin and the first appearance of the speaker of the House of Delegates. Doctor Gibbons then introduced the speaker, Edward M. Pallette to the House of Delegates.

\* \* \*

#### **II. Report of the Speaker on Personnel of Credentials Committee and Two Reference Committees.**—

The speaker announced that three committees of the House of Delegates had been appointed: A Committee on Credentials consisting of George Reinle of Oakland (chairman), Percy T. Magan of Los Angeles, and J. Homer Woolsey of San Francisco; a Reference Committee on Reports of Officers and Standing Committees consisting of Joseph King of Los Angeles (chairman), Edward N. Ewer of Oakland, and H. Walter Gibbons of San Francisco; and a Reference Committee on Resolutions and New and Miscellaneous Business consisting of H. A. L. Ryfkogel of San Francisco (chairman), Percy T. Phillips of Santa Cruz, and F. C. E. Mattison of Los Angeles.

\* \* \*

**III. Report of the Credentials Committee.**—The speaker announced that the next order of business would be the presentation of the Report of the Credentials Committee.

George G. Reinle, chairman of the Credentials Committee then submitted the following report:

1. Your Committee on Credentials begs leave to report that of the delegates and alternates listed in the corrected official program of the fifty-ninth annual session, a total of seventy-eight delegates and forty-nine alternates have registered and have credentials complying with the Constitution and By-Laws. We present a corrected official program in which we have checked the names of all delegates and alternates whose credentials have been submitted to this committee, either directly or through the State Association secretary or through a county society secretary.

2. The names not crossed out, of all delegates and alternates, on said corrected official program are entitled to membership in the House of Delegates in accordance with the provisions of the Constitution and By-Laws.

3. The name of the alternate for each delegate is printed opposite the name of each delegate in said corrected official program. If the delegate is not present and his alternate is not present, the committee recommends that the first available alternate appearing on said official program be seated, and if there be no available alternate then that some member of that respective component county society be selected by a majority of delegates and alternates present of that respective component county society, or if no delegate or alternate is present, the House of Delegates may select a member or members from that component county society to act as delegate or delegates thereof.

4. It is our recommendation that after the House has organized with the call of the roll of those whom we certify or recommend as delegates that a recess be called so that your Credentials Committee may secure information from county units, of names of members present to be recommended for house membership.

Doctor Reinle then moved, in order to bring this matter before the House, that this report as presented be accepted as the basis of organization of this House of Delegates of the fifty-ninth annual session of the California Medical Association at Del Monte, California.

Motion of George G. Reinle was seconded by T. Henshaw Kelly and unanimously carried.

The Credentials Committee recommended that delegates or alternates who do not expect to be present at the meeting of the House of Delegates on Wednesday do not take seats as acting delegates in the House tonight, lest through such action there be danger of lack of quorum at later meetings of the House. If they do not take seats tonight, when no business other than the acceptance of reports and resolutions will be considered, it will be possible to fill such vacancies at a later meeting.

\* \* \*

**IV. Roll Call.**—The secretary called the roll; one hundred and sixteen members of the House of Delegates consisting of officers, delegates, and alternates were seated and the speaker declared a quorum present. The speaker stated that those who had been seated tonight will make up the House Wednesday unless an alternate desired to release his seat to the delegate for whom he is serving.

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**V. Report of the President.**—At the request of the speaker, Morton R. Gibbons, president, submitted the following report:

The officers present to you in the "*Pre-Convention Bulletin*" much information about the affairs of our Association. It is expected that it will prove of great value.

This bulletin is an innovation, provided by our new by-laws. It is intended to carry to more members an understanding of Association affairs.

While the reports of your officers appear therein, there is still an important story to be told. The reports omit reference to the time, devotion, thought and ability expended by your officers and committeemen.

In the last year your Council has held four sessions—one of them at San Diego with five meetings, that is eight meetings in all. At one of those meetings all councilors were present. The average attendance at the principal meetings was 93 per cent.

At some of the San Diego meetings, councilors absented themselves to attend committee meetings or section programs. The average attendance, nevertheless, was 84 per cent for the year for all Council meetings. The Executive Committee held seven meetings with average attendance of 87 per cent.

This attendance record alone indicates a high order of devotion in your behalf.

The reports generally speak for themselves. The report of Dr. Gayle Moseley, chairman of the Committee on Industrial Practice is absent from the bulletin. I sincerely regret to say that Doctor Moseley has been ill. His committee has had little business laid before it during this year.

The last year has produced some notable pieces of work in behalf of our Association. I believe that it is fitting that I should give credit in this manner. The work of the Committee on Medical Economics, and especially the labor of Dr. John H. Graves, the chairman, has been most valuable. The House of Delegates last year directed the Council to proceed with a study of a plan for health insurance, proposed by Dr. Walter B. Coffey. Doctor Graves' committee has made a remarkable contribution. The essentials of the report will probably be published in the journal shortly. An epitome appears in the Pre-Convention Bulletin. This committee shares with the Committee on Public Policy and Legislation the most important duties of all of the standing committees. Its duty is



to make studies and to present to the Association information on such matters as state medicine.

On motion of Joseph Catton of San Francisco, duly seconded and carried, the report of the president was referred to the Reference Committee on Reports of Officers and Standing Committees.

\* \* \*

**VI. Report of the Council.**—At the request of the speaker, Oliver D. Hamlin of Oakland, chairman of the Council, submitted the following report of the Council:

#### COUNCIL MEETINGS FROM APRIL 1929 TO APRIL 1930

The Council has held three regular meetings during the past year, exclusive of the five daily meetings during the annual session. One of these was a special meeting called on March 1, 1930 for consideration of plans proposed in regard to medical care for persons of small incomes, and to consider the advisability of a basic science act in California. Eight Council meetings have, therefore, been held—five at the annual session at Coronado, four of which took place before the reorganization of the Council for this year; a fall meeting in Los Angeles on September 28; a spring meeting in San Francisco on January 18; and a special meeting on March 1 at Los Angeles. The average attendance at Council meetings was 84 per cent of the membership.

The Executive Committee of the Council has held six meetings between Council meetings.

#### FUNDS OF THE ASSOCIATION

The auditor's report shows a similar gain during 1929 to that which has been reported for several sessions, and a reserve on hand that augurs progress for the future of your medical association and that makes possible detailed studies of questions of medical economics.

This is the first year that a budget covering income and expenses of operation has been prepared. The chairman of the Auditing Committee will present this budget to the House of Delegates.

#### ANNUAL ASSESSMENT

The Council recommends that the annual assessment be as at present, \$10 per annum.

#### HERZSTEIN BEQUEST

During 1929 the accumulated interest on the \$20,000 left in trust for the suppression of nonscientific medicine in California, amounting to \$961, was placed to our credit by the trustees of the Herzstein money.

Believing that education of the public in scientific medicine is the most far-reaching and effective weapon against cults and quacks, your Council has appointed a committee to investigate and report on radio broadcasting of scientific medicine.

#### INCORPORATION

Following the authorization of the House of Delegates to secure a mail vote of the members on incorporation, a ballot was sent to each member of the California Medical Association.

The official count taken by the Executive Committee on December 1, 1929, showed a total vote of 3440 cast out of an active membership of 4809. Three thousand two hundred and seventy-six were for incorporation and 164 opposed to incorporation, giving thirty-three affirmative votes over the required two-thirds.

The legal counsel, Mr. Hartley F. Peart, has drawn up the Articles of Incorporation and the By-Laws under which this incorporation is to function.

#### CONSTITUTION AND BY-LAWS OF CALIFORNIA MEDICAL ASSOCIATION

The Constitution and By-Laws, after careful revision for two years, was finally adopted by the 1929 House of Delegates. Copies have been mailed to all members during the past year.

#### CLINICAL AND RESEARCH PRIZES

To the surprise of the Council and the members of the Award Committee, no papers were entered for the competition at the 1929 session. The Council authorized wider publicity and continuance of the competition. To date five papers have been entered, proving the wisdom of the decision against discontinuance.

The five papers submitted were read by the three members of the committee, each of whom voted independently of the other. Their vote coincides in awarding the Clinical Prize to the paper written under the pseudonym "Philo" by Dr. Emil Bogen of Los Angeles on "Pulmonary Hemorrhage" and the Research Prize to that under the pseudonym "Rose-Trendelenburg" by Dr. H. J. Hara of Los Angeles. Each of the prizes is for \$150, and in addition the Association presents a certificate of award to the winners.

#### MEMBERSHIP

With the formation of the Standing Committee on Membership, it is hoped that a larger percentage of unaffiliated licentiates who are eligible for membership will become members of the Association. The average increase in actual numerical growth for many years has been around 200. This year showed a gain of 221. Assuming that one-half of the California physicians who are not members are eligible, it would take twelve years to round all strays into the medical fold. The report of the Standing Committee on Membership and Organization at the 1930 session will cover only organization results. That of 1931 is awaited with interest.

#### WOMAN'S AUXILIARY

The Woman's Auxiliary of the state society was formed at the annual meeting at Coronado. During the past few months county auxiliaries have been organized in Contra Costa, Los Angeles, Kern, Orange, San Bernardino, Sonoma, Napa, San Diego, Monterey, and Alameda counties.

#### YOLO-COLUSA-GLENN COUNTY

The Glenn County society with seven members has voted to join the Yolo-Colusa County Society, since meetings of the combined counties would be of added interest to the members. The Council recommends that the House of Delegates cancel the charters now held by the respective counties and grant a new charter to the Yolo-Colusa-Glenn County Society.

#### OPTIONAL MEDICAL DEFENSE

Officers and councilors have been interested and gratified to observe the increasing interest of those members of the Association who have not already joined the Medical Society of the State of California. This society, a suborganization of the Association, affords the services of the legal department in cases where negligence is alleged in a suit against the doctor, arising out of his practice. Over seven hundred members of the Association belong to this society, and one experience in such a case immediately furnishes a new recruit for membership. The Council commends this organization to the attention of all members. Full information can be obtained from the secretary's office.

#### MEDICAL SERVICE PLANS

Pursuant to the instructions of the House of Delegates at the last annual session, your Council, and the Committee on Medical Economics under the chairmanship of Dr. John H. Graves, has given much thought to the problem of the high cost of sickness throughout the year, gathering statistics and other information relating to cost of hospitalization, medical fees, nursing care and allied subjects. An extended study of the legal aspects of the problem was made at the direction of the Council by our general counsel, who associated with himself the firm of McCutchen, Olney, Mannon, and Green.

There have been presented to the Council a number of medical service plans which have been given



earnest and thoughtful consideration. The Council is of the opinion that as yet no plan has been presented which can be endorsed in its entirety, and believes it a wise course to continue study of these very important matters before making recommendations to the House of Delegates and to the members of the Association as authorized by the House of Delegates at the last annual session.

#### MEDICAL PRACTICE ACT AND POSSIBLE BASIC SCIENCE OR QUALIFYING CERTIFICATE ACT

The Council endorses the recommendation of the Special Committee that no changes be made in the Medical Practice Act other than the insertion of a provision which would prevent graduates of medical colleges of states other than California from having privileges in acquiring licensure in California not enjoyed by graduates of this state. In other words, a provision requiring all applicants for M. D. licenses to have one year of internship or equivalent training before being eligible to apply for licenses.

As regards the so-called basic science law or qualifying certificate, the Council believes that the Special Committee should continue its studies and that the Council shall later decide what action shall be taken thereon.

#### COUNCIL ON MEDICAL ECONOMICS OF THE AMERICAN MEDICAL ASSOCIATION

The Council recommends that the House of Delegates of the California Medical Association be instructed to present a resolution asking the House of Delegates of the American Medical Association to consider the advisability of forming a council on medical economics and that the delegates of the California Medical Association be instructed to call the attention of the House of Delegates of the American Medical Association to certain experiences.

On motion of T. Henshaw Kelly of San Francisco, duly seconded and carried, the report of the Council was referred to the Reference Committee on Reports of Officers and Standing Committees.

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**VII. Report of the Auditing Committee.**—At the request of the speaker, T. Henshaw Kelly of San Francisco, chairman of the Auditing Committee, submitted the report of his committee and a budget of income and expenses of the year 1931 as provided in the Constitution.

#### ESTIMATED BUDGET FOR YEAR 1931-1932

##### Income

California Medical Association:	
County society dues .....	\$48,000.00
Interest—commercial and savings.....	3,600.00
Directory sales .....	15.00
Interest from Herzstein bequest.....	961.00
	<hr/>
	\$52,576.00
Journal:	
Advertising .....	\$40,000.00
Subscriptions paid for (including Utah and Nevada).....	1,500.00
Sale of books, etc., to San Francisco County Library.....	180.00
Estimated returns from Commercial Exhibit (net).....	2,000.00
	<hr/>
	\$43,680.00
	<hr/>
	\$96,256.00

##### Expenses

California Medical Association:	
Salaries:	
Secretary .....	\$ 3,600.00
Editors .....	10,000.00
Clerical .....	7,300.00
	<hr/>
	\$20,900.00
Rent .....	\$ 3,060.00
Office supplies.....	600.00
Office expense.....	150.00
Telephone .....	300.00
Annual meeting.....	4,000.00
Public Health Exhibit .....	3,000.00
Transportation .....	1,800.00
Radio .....	1,800.00
Prizes .....	300.00
Binding journals (23) .....	200.00
Membership directory.....	2,700.00

Legislative expense, 1931 .....	2,500.00
Miscellaneous cost for trustees—books, supplies, traveling expenses .....	300.00
Unforeseen miscellaneous contingent expenses .....	5,000.00
	<hr/>
	\$23,910.00

Journal:	
Publication expense.....	\$30,000.00
Commissions (Adv.), L. J. Flynn.....	3,500.00
Commissions, Cooperative Medical Advertising Bureau .....	4,000.00
Discounts .....	400.00
	<hr/>
	37,900.00

Legal Department:	
Legal expense.....	\$ 6,000.00
	<hr/>
	6,000.00
	<hr/>
	\$88,710.00

Estimated savings for 1931-32.....\$7,546.00

On motion of Joseph Catton of San Francisco, duly seconded and unanimously carried, the report of the Auditing Committee was referred to the Reference Committee on Reports of Officers and Standing Committees.

\* \* \*

**VIII. Report of the Secretary-Treasurer.**—At the request of the speaker, Emma W. Pope of San Francisco, secretary-treasurer, submitted the following report:

The California Medical Association, brought into being in 1856, fell into an unbroken eight-year slumber at the beginning of 1862. It was reawakened by Dr. T. M. Logan in 1870, and has continued an increasingly active existence ever since.

Sixty-six years are therefore the full span of its existence but, like humans of similar longevity, the Association camouflages and softens the record of its age. This meeting, really the sixty-sixth meeting of the California Medical Association, is called the fifty-ninth meeting of the House of Delegates.

Age rests becomingly on the man whose life has been a life of achievement. For the same reason, the years of our State Association should be acknowledged with pride. In the brief span of my association as secretary, the membership has increased by over 1200; the reserve by over \$85,000; attendance at the annual meetings has almost doubled; the journal is one-third larger; and the Association offices infinitely better located and equipped for service to the members. That all this has been accomplished by your councilors, with dues no greater and, in many instances, much less than the dues of other state associations of like standing, must give commendable satisfaction to every member of the California State Association.

The past year is marked by two major accomplishments—the adoption and publication of the present Constitution and By-Laws with its unusual calendar of dates and careful index; and the change in location of the Association offices. From indifferent and inconvenient quarters in a downtown business building, your Association has now suitably equipped modern offices in a Class A medico-dental building, situated in the center of the medical activities in San Francisco. Your Council with wise forethought has equipped the offices with modern business appliances to facilitate speed and accuracy in clerical work, and so permit a maximum service for the Association.

The total number of members December 31, 1929, was 4820. The net increase was 221. This net increase represents the remainder after losses by death, resignation, and failure in payment of dues have been deducted. Three hundred and sixty-one new members were enrolled during the year; fifty-three were lost by death; eleven resigned, and seventy-six forfeited membership by nonpayment of dues.

The report of the secretary formerly covered all society activities. Under the present Constitution, the chairmen of newly established committees, such as the Committee on Publications, Committee on Extension



sion Lecture Service, and Committee on Membership and Organizations, make separate reports. It seems unnecessary to duplicate the reports of these various chairmen by incorporating into your secretary's report comment on the work of the state office on these various society activities.

A Standing Committee on Placement Bureau, however, seems not to have been authorized and report thereon is in order. Fifteen physicians wrote to the office that they had taken one of the various positions to which the office had referred them. This service is usually given at a time of emergency in a young man's life and fills a much needed want. The calls for openings are in excess of the calls for physicians. Thirty-five stenographers and nurses and two technicians were also placed. It would follow that any ethical way of enlisting the interest of the managers of commercial concerns who employ physicians in their plants to care for their sick and injured and of our members who need physician assistants would be beneficial to this worthwhile service.

In a state with fifty-eight counties, forty-three county societies have charters with the California Medical Association. Six of these consist of two counties united under one society charter, as Lassen-Plumas; Yolo-Colusa and Yuba-Sutter. With the exception of Kings with a population of 23,000, Madera with 12,000 and Nevada with 11,000; no county with a larger population than 9000 lacks a county medical society. Of the fourteen physicians resident in Kings County, seven are members of Fresno County and one of Tulare. Madera also has fourteen resident physicians of whom six are members of the Fresno County Society, two of Merced and one of San Joaquin, leaving but five unaffiliated. Nevada County has twelve resident physicians, six of whom are members of the California Medical Association, five through the Placer County Medical Society and one through the Lassen-Plumas Society.

No new charters have been asked for. From the above report the need is not there, and no charters have been revoked.

The efficient service of the secretaries of the component county societies is largely responsible for the growth of the Association, for the interest in county society meetings, for the spirit of harmony prevalent, and for the loyalty and interest of the members.

\* \* \*

Doctor Pope then submitted excerpts from the audit of the books of the Association as prepared by Hugh Ross, public accountant, showing general income and expense for the year 1929, and stated that the full audit was open to the inspection of all members of the Association.

On motion of H. J. Ullmann of Santa Barbara, duly seconded and carried, the reports of the secretary-treasurer were referred to the Reference Committee on Reports of Officers and Standing Committees.

\* \* \*

VIII. Report of the Editors.—At the request of the speaker, Dr. George H. Kress of Los Angeles, editor, submitted the following report of the editors:

The first number of CALIFORNIA AND WESTERN MEDICINE, the official journal of the California Medical Association, which was brought off the press by the present editors was that of April 1927. In the period which has since elapsed, your editors have striven to bring into existence a state medical society journal which would not only be an excellent expression of the scientific spirit of the members of your Association, but which would subserve also in fullest possible measure the various other aims of a state medical society.

At the same time an effort has been made to improve the typographical make-up of the journal; and to so arrange its contents that it could be referred to and perused with the same satisfaction that a reader finds in his favorite newspaper or other periodicals. That these objects have been somewhat attained may

be noted from the fact that the different departments of CALIFORNIA AND WESTERN MEDICINE are generously abstracted and excerpted by other journals; and that in typographical form as well as in contents in compares favorably with the best journals published by other state medical associations.

Another evidence of its worth is to be found in the fact that the recommendation made last year by the editors that a 20 per cent increase be authorized in the advertising rates, resulted in no material loss in the number of firms who had previously placed announcements in our official publication. Even more gratifying is the knowledge that through such change in advertising rates, the annual income of CALIFORNIA AND WESTERN MEDICINE was increased some \$6000, this extra source of income making it possible for our journal, for the first time in its existence, to practically produce an income that is in excess of the cost of its production, publication and distribution.

So that CALIFORNIA AND WESTERN MEDICINE, in spite of a typographical make-up that is probably superior and more expensive than that of any other state medical journal in the United States, was, with its subscription income, last year on a self-supporting basis. By contrast, for the year 1928, the loss on production, publication and distribution was \$3,334.84 (that and somewhat similar sums representing the annual loss in previous years both under the present editors and their predecessors).

For the year 1929, however, there was no loss, the income from sources such as advertisements (\$40,098.86), subscriptions (\$12,282.63), miscellaneous (\$180) producing a total income of \$52,561.49 as against a total expense for production, printing and distribution amounting to \$51,089.76; thus permitting a surplus to the amount of \$1,471.73 to be transferred from the official journal account into the general fund of the Association. It is hoped that such a surplus will continue to increase with each year.

The detailed financial account follows:

JOURNAL INCOME AND EXPENSE FOR			
YEAR 1929			
Income:	1929	1928	
Advertising income.....	\$40,098.86		\$34,839.78
Subscriptions .....	12,282.63		11,792.30
Sale of review books.....	180.00		180.00
	\$52,561.49		\$46,812.08
Expenses:			
Journal—			
Production.....	\$26,682.60	\$26,422.33	
Distribution..	2,329.82	2,217.29	
	29,012.42		28,739.62
Selling expense.....	6,553.48		6,261.65
Promotion—Complimentary and exchange ..	453.00		399.00
General expense:			
Salaries .....	\$12,369.00	\$12,210.00	
Expense .....	2,671.86	2,536.65	
	15,040.86		14,746.65
Total expense.....	\$51,089.76		\$50,146.92
Net:			
Gain for year, transferred to surplus.....	1,471.73		*3,334.84
	\$52,561.49		\$46,812.08

\* Loss for 1928.

Referring now to the printed matter which appeared in the journal during the last year, a summary of the original, special article and case report papers which were received shows the following distribution:

One hundred and forty-one papers read at last annual meeting of which thirty-five are still unpublished.

Papers published in 1929.....	47
Papers published in 1930.....	29
Read and published elsewhere, declined, or not sent in .....	30
Remain unpublished.....	35
Total.....	141



Articles published during the past year (May 1929 to May 1930);

Papers from 1927 meeting.....	1
Papers from 1928 meeting.....	17
Papers from 1929 meeting.....	63
Prize papers.....	0
Papers read before general sessions.....	7
Lure of Medical History.....	9
Papers from Utah and Nevada.....	8
Papers read before other societies.....	19
Papers not read.....	8
Clinical Notes and Case Reports.....	33

Total.....163

We have at present on hand:

Papers from 1929 meeting.....	35
Read before other societies.....	9
Original papers not read.....	10
Read before Utah and Nevada.....	4
Lure of Medical History.....	0
Case Reports and Clinical Notes.....	7

Total.....65

Commenting now upon CALIFORNIA AND WESTERN MEDICINE as a state medical society journal, in comparison with other medical journals having somewhat similar aims and responsibilities, it may be said that, under the regime of its present editors, our own official journal in some of its columns may seem to have given extra space to matters of organization policy and needs. No apology is made for doing this. The fact that many national and state organizations and committees throughout our country are today investigating so many phases of medical work and costs, and the fact that in the lay newspapers and periodicals there has been much unwarranted criticism of the medical profession, shows how negligent the publication mouthpieces of the medical profession have been in the past in not presenting economic and similar problems of medical practice; so that defects could be remedied through evolutionary processes from within, rather than through revolutionary plans and schemes from without. Your editors, with the support of your Council, have felt that CALIFORNIA AND WESTERN MEDICINE would have failed in some of its most important reasons for existence if it had not given expression to policies that would make for a stronger and more efficient California Medical Association, both from the scientific and organization standpoints.

With the excellent special articles and case reports, the symposia in the Bedside Medicine department and the practically short editorials in the Medicine Today department, it may be assumed that the scientific aims of our Association are being adequately looked after, and that the space given to a discussion of economic policies and of organization problems is not only fully warranted but needed. It is well to remember that adulation at the shrine of Science should not be so great as to bring about neglect of those economic and other needs of the medical profession which have an important relationship to its professional efficiency and prestige.

In the performance of their work, your editors have continued their original arrangement of alternating all manuscripts for editorial revision, of assuming special responsibilities for certain departments and of each going over all galley and page proofs. This double cross-check has been found to be desirable.

To the many members of the California Medical Association who in the last as in the previous years have given CALIFORNIA AND WESTERN MEDICINE such generous and kindly coöperation, the thanks of the editors are again expressed.

To be permitted to carry on the official journal and to attempt to make it an increasingly better state medical society publication is in itself a privilege and an honor, but for the editors who have had this work and responsibility, to receive at the same time the cordial coöperation of colleagues from every part of

California, as well as from our affiliated societies in Nevada and Utah, makes them very grateful. That CALIFORNIA AND WESTERN MEDICINE shall continue to improve with each year, and be of increasing service to the members of the California Medical Association, is the earnest wish of your editors.

On motion of T. Henshaw Kelly, duly seconded and carried, the report of the editors was referred to the Reference Committee on Reports of Officers and Standing Committee.

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**IX. Report of the General Counsel.**—The general counsel submitted a report on the work of the legal department during the past year. Mr. Peart then explained the plans for carrying out the incorporation of the Association authorized at the last annual meeting of the House of Delegates.

On motion of W. B. Bowman of Los Angeles, duly seconded and carried, the report of the general counsel was referred to the Reference Committee on Reports of Officers and Standing Committees.

\* \* \*

**X. Reports of Standing Committees.**—The speaker stated that the reports of standing committees were published in the Pre-Convention Bulletin for the consideration of the House of Delegates and the Reference Committee on Reports of Officers and Standing Committees.

\* \* \*

**XI. Committee on Hospitals, Dispensaries, and Clinics.**—The speaker stated that the next order of business would be the report of Dr. John C. Ruddock, member of the Committee on Hospitals, Dispensaries, and Clinics. Doctor Ruddock then presented his report.

Note.—Full report to be printed in July issue and in reprint form for distribution to members.

On motion duly made, seconded and carried, the report of the Committee on Hospitals, Dispensaries, and Clinics was referred to the Reference Committee on Reports of Officers and Standing Committees.

\* \* \*

## XII. New Business:

### 1. Resolutions:

(a) *Resolution No. 1. Death of Dr. William Taylor McArthur.*—William Duffield of Los Angeles then presented the following resolution on the death of Dr. William Taylor McArthur:

Whereas, In the death of Dr. William Taylor McArthur at Los Angeles on March 11, 1930, the California Medical Association loses one of its most beloved, generous and devoted members; and

Whereas, Doctor McArthur served this Association as a Councilor and as President-Elect and President through a long period of its important growth and development with the highest degree of ability, devotion, patience, and judgment in a most unselfish manner; and

Whereas, Doctor McArthur as a practicing physician and surgeon endeared himself to the public in a manner worthy of exemplification by a younger generation, and by his oratory and ready and kindly wit in a remarkable degree advanced the cause of organized medicine among the laity as well as with his colleagues, and as a citizen maintained a civic, social and home life which reflects credit upon his profession; therefore be it

Resolved, That the members of the House of Delegates of the California Medical Association bow their heads in reverence to his memory and in gratitude for their association with him, for his splendid service and in the hope that the example of his life will stimulate youth to follow such a life; and be it further

Resolved, That a copy of these resolutions be spread upon the minutes of the House of Delegates and the same be published in CALIFORNIA AND WESTERN MEDICINE.

On motion of Joseph Catton of San Francisco, it was stated that when the House of Delegates ad-



journ, it do so in the honor and in the memory of Dr. William Taylor McArthur. Such motion was duly seconded and unanimously carried.

The resolution was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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(b) *Resolution No. 2. Narcotic Addicts.*—William Duffield of Los Angeles then presented the following resolution on narcotics:

Whereas, Physicians and surgeons are frequently confronted with the question of deciding as to whether narcotic addicts are or are not legitimate exceptions under Section 1 or Section 2 of the Harrison Narcotic Act, and corresponding clauses under the State Poison Act; and

Whereas, Members of this Association have not infrequently been subjected to humiliation and disgrace by being arrested and prosecuted for prescribing for addicts having sufficient pathology to make them exceptions under the law, or for addicts who are really incurable, or for such border-line cases as need temporary relief to alleviate the most acute suffering; and

Whereas, there is need of a better understanding between the multiplicity of city, county, state, and federal narcotic enforcement officers and the medical profession as to what are and are not exceptions; therefore be it

Resolved, That the Committee of Public Policy of the California Medical Association be and hereby is instructed to take steps as will relieve this situation either by amendment of the Narcotic Law or otherwise as will establish a medical narcotic commission or commissions to which may be referred all doubtful or border-line cases for final decision as to whether or not they are legitimate exceptions, said commission or commissions to be comprised of medical men or women who have had practical experience with addicts and who have a sufficient knowledge of neurology to enable them to reach conclusions.

Resolution No. 2, Narcotic Addicts, was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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(c) *Resolution No. 3. Report of the Committee on Hospitals, Dispensaries, and Clinics.*—H. J. Ullmann of Santa Barbara presented the following resolution on the report of the Committee on Hospitals, Dispensaries, and Clinics:

Resolved, That the report of the Subcommittee on Clinics of the Committee on Hospitals, Dispensaries, and Clinics be referred to the Reference Committee with the request that the essential information contained therein be published in CALIFORNIA AND WESTERN MEDICINE.

Resolution No. 3, report of the Committee on Hospitals, Dispensaries, and Clinics was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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(d) *Resolution No. 4. Use of Intoxicating Liquors.*—Rodney Yoell of San Francisco submitted the following resolution on intoxicating liquors:

Whereas, The use or abuse of alcoholic beverages bear a definite relationship to the etiology of disease; and

Whereas, Legislation having to do with the use or abuse of alcohol bears a definite relation to such use, temperate or intemperate; therefore be it

Resolved, That this House of Delegates of the California Medical Association do hereby instruct the secretary of the Association to issue a postcard ballot and mail it to the various members of this Association within thirty days and publish the results in the state medical journal, the said ballot to contain the three following sentences:

1. I favor the repeal of the Eighteenth Amendment and supporting legislation.

2. I favor the continuance of the Eighteenth Amendment and supporting legislation.

3. I favor modification of the Eighteenth Amendment and supporting legislation so as to permit:

(a) The use of light wine, beer, and certain spirituous liquors.

(b) A further action against the use of any alcoholic beverage whatsoever.

Resolution No. 4, use of intoxicating liquors was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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(e) *Resolution No. 5. Tax Exemption for Nonprofit Hospitals.*—Joseph Catton of San Francisco presented the following resolution on nonprofit hospitals:

Whereas, At the next meeting of the legislature of the State of California there will be proposed an act exempting from taxation certain nonprofit hospitals; and

Whereas, The Council of the California Medical Association, after thorough consideration, endorsed the enactment of such an act; therefore be it

Resolved, That the House of Delegates of the California Medical Association in fifty-ninth convention assembled endorses and urges the passage of Constitutional Amendment No. 6 exempting nonprofit hospitals from taxation in the State of California.

Resolution No. 5, tax-exemption of nonprofit hospitals was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

\* \* \*

## 2. New Business:

(a) *Change in Program of General Session.*—The speaker announced that a change in the program of the general session had been made necessary by the enforced absence of Dr. McKim Marriott of St. Louis and that Dr. Ernst A. Sommer, vice-president of the American Medical Association, would address the members; that at the joint meeting of General Medicine and Pediatrics on Wednesday Dr. Rexwald Brown would present a paper on the "Business of Medicine," followed by discussion by Doctors Coffey and Graves.

(b) *Amendment to Section 12 of Article 10 of the Constitution.*—The speaker stated that an amendment to the constitution and by-laws had been offered. Amendment to Section 12 of Article 10 of the Constitution as submitted by Robert V. Day of Los Angeles was read by the secretary as follows:

In conformity with Article XV, Section 1, of the Constitution of the California Medical Association, I hereby introduce the following amendment to Section 11 of Article X of said Constitution, making Section 11 read as follows:

The Council, at the organization meeting thereof, shall elect a chairman, a vice-chairman, a secretary-treasurer, an editor, and in its discretion, one or more associate editors, each to serve for the term of one year. Nothing in this section shall be construed to prohibit the same person holding at the same time both the office of secretary-treasurer and the office of editor; but neither the secretary-treasurer nor editor shall hold any other office in the California Medical Association.

The speaker announced that in accordance with the provisions of the Constitution this amendment as offered would be received and published twice in the journal and then acted upon at the next annual meeting.

(c) *Invitation to Members of Standing Committees.*—Joseph King, chairman of the Reference Committee on Reports of Officers and Standing Committees, stated that members of standing committees who had submitted reports were invited to appear before the committee and present points which they desired to be acted upon.

(d) *Caucus for District Councilors.*—Doctor King stated that a caucus for nomination of district councilors should be held prior to the next meeting of the House of Delegates and suggested that members of



the various districts meet immediately following the adjournment of the House.

(e) *Legal Department Report*.—On motion of Joseph Catton of San Francisco, duly seconded, and carried, all details of the report of the legal department which were presented for the information of members only were ordered deleted from the printed minutes.

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**XIII. Reading and Adoption of Minutes.**—Minutes of the meeting were then read and, there being no objection, were approved.

\* \* \*

**XIV. Adjournment.**—There being no further business the meeting adjourned to meet at 8 p. m. Wednesday, April 30, 1930.

### Second Meeting of the House of Delegates

Held in the Copper Cup Room, Hotel Del Monte, Del Monte, California, Wednesday, April 30, 1930, at 8 p. m.

**I. Call to Order.**—The meeting was called to order by the speaker of the House, Edward M. Pallette of Los Angeles.

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**II. Roll Call.**—The secretary called the roll; 116 members of the House of Delegates, consisting of officers, delegates and alternates, were seated and the speaker declared a quorum present.

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**III. Announcement of Place of 1931 Meeting.**—The speaker announced that the Council had accepted the invitation of San Francisco for the next annual meeting.

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**IV. Resignation of Robert A. Peers.**—The speaker presented the following resignation of Robert A. Peers as councilor at large:

"I hereby respectfully submit my resignation as councilor-at-large to be effective immediately."

On motion of Joseph Catton of San Francisco, duly seconded and unanimously carried, it was

Resolved, That the resignation of Robert A. Peers as councilor-at-large be accepted.

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### V. Election of Officers:

**1. President-Elect.**—The speaker announced that the next order of business would be the election of officers, and that nominations for president-elect were in order.

William Duffield of Los Angeles stated that, in accordance with the time-honored custom, the selection of the president-elect alternated between the north and the south.

William Duffield then nominated Junius Brainard Harris of Sacramento as president-elect; such nomination was seconded by T. Henshaw Kelly of San Francisco.

Joseph Catton of San Francisco moved that the nominations be closed and the secretary be instructed to cast the unanimous ballot of the House of Delegates for Junius B. Harris.

The secretary cast the ballot and the speaker announced Junius B. Harris of Sacramento duly elected president-elect.

**2. Speaker of the House of Delegates.**—The speaker announced that the next order of business would be the election of a speaker of the House of Delegates and asked that the president, Morton R. Gibbons, take the chair. Doctor Gibbons then took the chair and called for nominations for speaker of the House of Delegates.

R. G. Taylor of Los Angeles nominated Edward M. Pallette of Los Angeles as speaker of the House; such nomination was seconded by Oliver D. Hamlin of Oakland.

T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed

to cast the ballot; such motion was duly seconded and carried.

The secretary cast the ballot and the president declared Edward M. Pallette of Los Angeles duly elected speaker of the House of Delegates for the term of one year. Doctor Pallette then took the chair.

**3. Vice-Speaker of the House of Delegates.**—The speaker announced that the next order of business would be the election of a vice-speaker of the House of Delegates.

William Duffield of Los Angeles nominated John H. Graves of San Francisco as vice-speaker of the House; such motion was duly seconded.

H. J. Ullmann of Santa Barbara moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the ballot and the speaker announced John H. Graves of San Francisco duly elected vice-speaker of the House of Delegates for the term of one year.

\* \* \*

**VI. Election of Councilors.**—The speaker announced that the election of district councilors would be the next order of business.

**1. Second District.**—The secretary announced that William Duffield of Los Angeles had been nominated as councilor for the second district by written nomination filed with the secretary, signed by delegates Joseph M. King and A. J. Scott of Los Angeles; such nomination was duly seconded.

Ferdinand Stabel moved that the nominations be closed and the secretary be instructed to cast the ballot for William Duffield; such motion was duly seconded and carried.

The secretary cast the ballot and the speaker announced the election of William Duffield as councilor for the second district for a term of three years.

**2. Fifth District.**—The secretary announced that Alfred L. Phillips of Santa Cruz had been nominated as councilor for the fifth district by written nomination filed with the secretary, signed by delegates L. M. Liles, Santa Cruz; A. H. McFarlane, Santa Clara; R. L. Hull, San Benito; E. F. Ziegelman, San Mateo and E. M. Miller, Santa Clara; such nomination was duly seconded and carried.

A. M. Rogers moved that the nominations be closed and the secretary be instructed to cast the ballot for Alfred L. Phillips; such motion was duly seconded and carried.

The secretary cast the ballot and the speaker announced the election of Alfred L. Phillips as councilor for the fifth district for a term of three years.

**3. Eighth District.**—The secretary announced that Robert A. Peers of Colfax had been nominated as councilor for the eighth district by written nomination filed with the secretary, signed by delegates F. Stabel of Shasta and W. H. Pope of Sacramento; such nomination was seconded by Joseph Catton of San Francisco.

T. Henshaw Kelly moved that the nominations be closed and the secretary be instructed to cast the ballot for Robert A. Peers; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of Robert A. Peers as councilor for the eighth district for a term of three years.

**4. Councilors-At-Large.**—The speaker announced that the next order of business would be election of three councilors-at-large who would be nominated from the floor; two for a term of three years, and one for a term of one year to fill the unexpired term of Robert A. Peers.

(a) Harry E. Zaizer of Orange County nominated Ruggles A. Cushman of Santa Ana to succeed himself as councilor-at-large; such nomination was seconded by Joseph King of Los Angeles.

William H. Kiger of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot for Ruggles A. Cushman; such motion was duly seconded and unanimously carried.



The secretary cast the ballot and the speaker announced the election of Ruggles A. Cushman as councilor at large to succeed himself for a period of three years.

(b) Henry W. Gibbons of San Francisco nominated T. Henshaw Kelly of San Francisco to succeed himself as councilor-at-large; such nomination was seconded by Oliver D. Hamlin of Oakland.

Irving Ingber of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot for T. Henshaw Kelly; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of T. Henshaw Kelly as councilor-at-large to succeed himself for a period of three years.

(c) C. A. Dukes of Alameda nominated Edward N. Ewer of Oakland as councilor-at-large for a period of one year to fill the unexpired term of Robert A. Peers; such nomination was seconded by Joseph Catton of San Francisco.

Junius B. Harris of Sacramento moved that the nominations be closed and the secretary be instructed to cast the ballot for Edward N. Ewer; such motion was seconded by Oliver D. Hamlin of Oakland, and unanimously carried.

The secretary cast the ballot and the speaker announced the election of Edward N. Ewer as councilor-at-large for a term of one year.

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**VII. Delegates and Alternates to the American Medical Association.**—The speaker announced that election of three delegates and alternates to the American Medical Association was the next order of business, and that the elections were for the sessions of 1931 and 1932.

(a) Karl L. Schaupp of San Francisco nominated Irving S. Ingber of San Francisco as delegate to the American Medical Association for the sessions of 1931 and 1932; such nomination was seconded by Joseph Catton of San Francisco. William Bowman of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of Irving S. Ingber of San Francisco as delegate to the American Medical Association for the sessions of 1931 and 1932.

Albert Soiland of Los Angeles stated that he had served as delegate with Dr. Victor Vecki and that Doctor Vecki had always been present at the sessions of the American Medical Association and had taken an active interest in the welfare of the Association. Doctor Soiland then moved that a vote of thanks be extended to Dr. Victor Vecki; such motion was duly seconded and unanimously carried.

(b) H. A. L. Ryfkogel of San Francisco nominated William E. Stevens of San Francisco as alternate to Irving S. Ingber for the American Medical Association sessions of 1931 and 1932; such nomination was duly seconded. Irving Ingber moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of William E. Stevens of San Francisco as alternate to Irving S. Ingber for the American Medical Association sessions of 1931 and 1932.

(c) George G. Hunter of Los Angeles nominated Percy T. Magan of Los Angeles as delegate to the American Medical Association for the sessions of 1931 and 1932; such nomination was duly seconded. A. J. Scott of Los Angeles moved that the nominations be closed and the secretary cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of Percy T. Magan as delegate to the American Medical Association for the sessions of 1931 and 1932.

(d) A. J. Scott of Los Angeles nominated Charles D. Lockwood of Pasadena as alternate to Percy T. Magan for the American Medical Association sessions of 1931 and 1932; such nomination was duly seconded. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of Charles D. Lockwood of Pasadena as alternate to Percy T. Magan for the American Medical Association sessions of 1931 and 1932.

(e) William R. Molony of Los Angeles nominated Junius B. Harris of Sacramento as delegate to the American Medical Association for the sessions of 1931 and 1932; such nomination was duly seconded.

Albert Soiland of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of Junius B. Harris of Sacramento as delegate to the American Medical Association for the sessions of 1931 and 1932.

(f) E. M. Miller of Santa Clara nominated John Hunt Shephard of San Jose as alternate to Junius B. Harris for the American Medical Association sessions of 1931 and 1932; such nomination was duly seconded. Edward F. Ziegelman of San Mateo moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the ballot and the speaker announced the election of John Hunt Shephard of San Jose as alternate to Junius B. Harris for the American Medical Association sessions of 1931 and 1932.

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**VIII. Member of Program Committee.**—The chair announced that an error appeared in the printed program. That under the new Constitution members of the Program Committee were elected by the Council and therefore no member could be elected at this time.

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**IX. Resolutions of Appreciation.**—The chair stated that the next order of business would be the presentation of any resolution which it was desired to be acted upon by the House.

#### RESOLUTIONS ON THE LOS ANGELES AND SAN FRANCISCO CANCER RESEARCH FOUNDATIONS

T. Henshaw Kelly of San Francisco stated that it seemed that it would be fitting for the House of Delegates to express its appreciation of the generous donations of Messrs. Paul Shoup, Herbert Fleischhacker, Stanley Dollar, W. K. Kellogg, and others for the study of cancer.

Doctor Kelly then presented the following resolution:

Whereas, The dread scourge of cancer, in an ever-mounting toll, is decimating the population of our country so that today its dire death roll accounts for the life, in those of forty years of age and upwards, of one woman out of every eight and one man out of approximately every twelve, thus making it a sacred duty incumbent upon all members of our beloved profession to combat its ravages with every arrow in the armamentarium of the science and skill at our command, and to shrink from no sacrifice, however great, in order to halt its forward march and bring to an end its almost unveiled threat to annihilate mankind; and

Whereas, Many agencies and investigators are making researches designed to add to man's knowledge of this disease which causes so much illness, pain, death, and other loss to individual citizens and to the nation; and

Whereas, Some recent studies by two members of the California Medical Association, Dr. Walter B.



Coffey and Dr. John D. Humber, are, in the opinion of many of the leaders of our profession who have had the opportunity to observe this work, of such nature as to give aid in the solution of the cancer problem; and which work and investigations of our California colleagues are, as stated by them, and will remain for some time, in the research period and no scientific or definite pronouncement can or should now be made of the results thereof; and

Whereas, In the city of San Francisco Herbert Fleishhacker, Paul Shoup, and Stanley Dollar, acting for themselves and for other public-spirited citizens, have arranged to place the sum of \$500,000 at the disposal of the Better Health Foundation of California to carry on these investigations and kindred studies; and in the city of Los Angeles W. K. Kellogg has given the Kellogg Foundation the income from an endowment of \$2,000,000 for similar purposes; and

Whereas, This Association by its Constitution and membership is irrevocably committed to the principles of the progress of medical science and the unprejudiced pursuit of truth and fact; now therefore be it

Resolved, That the California Medical Association, acting through its House of Delegates in its fifty-ninth annual session assembled at Del Monte, cordially approves and commends this generous and humane action of Paul Shoup, Herbert Fleishhacker, Stanley Dollar and their associates, and W. K. Kellogg, that affords the necessary means, administered by competent authority, to enable the investigations to properly proceed, adds greatly to the resources of scientific research in the State of California and encourages others to emulate the good deeds of these men; and be it further

Resolved, That a copy of this resolution be sent to each of the donors with a suitable letter of transmittal by this Association.

Doctor Kelly stated that in order to place the resolution before the House for action, he moved for the adoption of the foregoing resolution; such motion was seconded by Rodney Yoell of San Francisco and unanimously carried.

#### RESOLUTIONS OF THANKS TO GUEST SPEAKERS, PRESS, AND HOSTS

LeRoy Brooks of San Francisco then presented the following resolution of appreciation:

Resolved, That the California Medical Association express its appreciation of the work on behalf of the Association of the Committee on Arrangements and extend its sincere thanks to the members of that committee, especially William M. Gratiot of Monterey; and be it further

Resolved, That the California Medical Association extend sincere thanks to the management of Hotel Del Monte and staff for their generous and obliging hospitality and entertainment, which has made this fifty-ninth annual session of the California Medical Association one of the most successful in its history; and to the press of Monterey for its coöperation and interest in behalf of scientific medicine; and be it further

Resolved, That the thanks of the California Medical Association be extended to our invited guests: Dr. A. U. Desjardins, Dr. George M. Curtis, and Dr. Fred D. Weidman; and also to Dr. Ernst Sommer, who so generously took part in our program; for their presence and addresses, which have contributed in large measure to the success of this fifty-ninth session.

On motion of T. Henshaw Kelly, duly seconded and carried, the foregoing resolution was adopted.

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**X. Report of the Reference Committee on Reports of Officers and of Standing Committees.**—The speaker declared that the next order of business would be the presentation of the report of the Reference Committee on Reports of Officers and Standing Committees. Dr. Joseph M. King, chairman, then presented

the following report on behalf of his committee (Joseph M. King, Chairman, and Edward N. Ewer and H. Walter Gibbons):

1. *Address of the President.*—The committee heartily commends the address of the president, Morton Gibbons, for consideration of the members of the California Medical Association and felicitates President Gibbons on the able, forceful and conservative policy which he suggests.

2. *Report of the Council.*—Certain items in the report of the Council were brought to the attention of the House:

(a) *Annual Assessment.*—Your Committee accepts the recommendation of the Council that the annual dues be set at \$10.

The chairman of the Reference Committee then moved for the adoption of the recommendation; such motion was duly seconded and unanimously carried.

(b) *Radio Broadcasting.*—Your committee approves the action of the Council in its proposed use of the income from the Herzstein bequest for radio broadcasting.

The chairman of the Reference Committee then moved for the adoption of the recommendation; such motion was duly seconded and unanimously carried.

(c) *Incorporation.*—The committee commends the action of the Council in proceeding with the incorporation authorized by the House of Delegates at its last session.

(d) *Woman's Auxiliary.*—The committee notices with pleasure the report of the Council dealing with the formation of county units of the Woman's Auxiliary and it earnestly recommends to the members of the House of Delegates and to the councilors and officers of the Association that continued coöperation and aid be given to establish as rapidly as possible units throughout the state. It foresees the possibility of much fruitful work by members of this organization in matters pertaining to health.

The chairman of the committee then moved for the adoption of the recommendations contained in this section; such motion was duly seconded and unanimously carried.

(e) *Yolo-Colusa-Glenn County Society.*—In accordance with the recommendation of the Council, your committee recommends that the Council be directed to cancel the charters of the Yolo-Colusa and the Glenn County societies and grant a new charter to the combined Yolo-Colusa-Glenn County Society.

The chairman of the committee then moved for the adoption of the above recommendation; such motion was duly seconded and unanimously carried.

(f) *Medical Practice Act.*—Your committee commends the decision of the Council in regard to the amendment of the Medical Practice Act at the next session of the legislature under such conditions as they may approve. Your committee adopts the recommendation of the Council and recommends further study of the possible qualifying certificate act.

The chairman of the committee then moved for the adoption of the foregoing section; such motion was duly seconded and unanimously carried.

(g) *Council on Medical Economics of the American Medical Association.*—The committee recommends, as indicated in the report of the Council, that our delegates to the American Medical Association be instructed to attempt to secure the formation of a Council on Medical Economics of the American Medical Association.

The chairman of the committee then moved for the adoption of the recommendation on a Council on Medical Economics; such motion was duly seconded and unanimously carried.

(h) *Medical Service.*—An extensive study of statistics and conditions relating to medical care has been made by the Committee on Medical Economics under the able leadership of Dr. John H. Graves. The complete report warrants the approbation of the House of Delegates. Your committee approves the recom-



mentation of the Council suggesting further study of the question and recommends that Doctor Graves be granted a few moments at this time in explanation of the work of his committee.

2. *Report of the Secretary-Treasurer.*—We commend highly the report of the secretary and we congratulate Doctor Pope and her aides upon the excellent conduct of the state office. We urge the Council and the editors of the journal to give publicity to the work being done in placing doctors and others in positions for which they are fitted. We recommend to the House of Delegates that a Standing Committee on Placement Bureau be created of which the secretary shall be ex-officio the chairman. We commend the secretary on the efficient way in which she has corresponded with component county societies, bringing about increased interest and cooperation of the Association as a whole. The report of the auditor, as submitted by the treasurer, shows that the financial status of the Association is sound.

The chairman of the committee then moved for the adoption of the recommendation contained in the foregoing paragraph; such motion was duly seconded and carried.

3. *Report of the Editors.*—We felicitate the editors of the state journal upon bringing CALIFORNIA AND WESTERN MEDICINE to its present high state of efficiency—that of being the best state medical journal in the United States, a journal of which we are all proud. We especially call attention to the fact that it is now an asset and not a financial liability to our membership.

4. *Report of the Auditing Committee.*—Your committee recommends that the report of the Auditing Committee, as submitted by its chairman, and the budget of income and expenses for 1931 be approved.

The chairman of the committee then moved for the adoption of the budget and report of the Auditing Committee; such motion was duly seconded and carried.

5. *Report of the General Counsel.*—The report of the counsel shows that the general counsel and his associates are alert to the best interests of the medical profession. The legal department deserves the gratitude of the members on account of the high standard of legal talent made available and the soundness of opinions and investigations furnished throughout the year.

6. *District Councilor Reports.*—The membership is particularly fortunate in its selection of councilors, as indicated by the reports, of the work done. We particularly felicitate San Francisco, the sixth district, on securing its own home, and the able and pleasing manner in which it is being brought about. It is the first society in the state to have attained this desirable condition. In regard to those districts containing many small, widespread cities, we praise their action in securing successful joint meetings with able speakers.

7. *Report of Standing Committees.* (a) *Committee on Public Health and Instruction.*—The committee is impressed with the report furnished by the Committee on Public Health and Instruction and the work which has been done by the local society at Long Beach as presented by Dr. Fred B. Clarke, a member of the standing committee. Their suggestions as outlined in the report are interesting, and are recommended for consideration of the Council. The Reference Committee recommends that the Council pass a resolution appropriating funds, wherever it deems wise, to inaugurate this work in those county societies who are willing to carry it on, and it suggests that details of the campaign conducted so successfully at Long Beach be secured and studied with this end in view.

(b) *Committee on Associated Societies and Technical Groups.*—As suggested by the committee, we recommend that the Council send official delegates to the annual sessions of the neighboring state medical societies, if in its judgment it would promote good fellowship.

The chairman then moved for the adoption of the recommendation on official delegates to neighboring state societies; such motion was duly seconded and unanimously carried.

(c) *Committee on Extension Lectures.*—We call attention to the very excellent work being done by the Committee on Extension Lectures and commend it to the House of Delegates. We are fully appreciative of the large amount of valuable work that is being carried on.

(d) *Committee on History and Obituaries.*—It is very desirable that the medical history of the California Medical Association and of its component county societies be compiled, as recommended by the Committee on History and Obituaries, and to that end we endorse the three recommendations of the committee regarding the compiling of histories of county and state medical societies and that of the State Board of Health, and recommend that the House of Delegates direct the Council to continue its efforts in this direction.

The chairman then moved for the adoption of the recommendations of the Committee on History and Obituaries; such motion was duly seconded and unanimously carried.

(e) *Committee on Hospitals, Dispensaries, and Clinics.* Your committee has considered with great interest the extensive and able report of the Committee on Hospitals, Dispensaries, and Clinics presented by Dr. John C. Ruddock as chairman of the Clinic Division. It recommends:

First: That the report be approved and printed under the supervision of the editors and sent to all members of the Association.

Second: That copies of the report be furnished to the Committee on Public Policy and Legislation, and to the National Committee on the Cost of Medical Care.

Your committee recommends that the Council be instructed to study this report, and when in its judgment that step should be taken, that the proper legislation be prepared and presented to the state legislature:

1. Defining clinics and placing the licensing and standardization thereof under the jurisdiction of a suitable state agency.

2. That the California Medical Association, represented by the House of Delegates, approve the establishment of proper standards of medical practice in connection with dispensaries for the maintenance of which charitable and public funds are devoted; and favors the centralization of clinics, dispensaries, and health units in large communities, thereby avoiding needless duplication of service.

That the Council be further authorized and instructed to appropriate sufficient funds of the Association to make an adequate survey of all clinics, dispensaries, health centers, and health units or other institutions or organizations of similar nature now being maintained in the State of California wherein charitable or public funds are being used for the purpose of furnishing medical service to the indigent poor, such survey to cover among other subjects, the following:

1. The physical plant and equipment of such institutions.
2. The management and administrative set-up.
3. The personnel of the staff.
4. The source of the funds supporting the institution.
5. The social service structure.
6. The need of the institution to the community in which it exists.

That this survey be carried on through such agencies as the Council may approve.

That the Council be also authorized and instructed to direct the secretary-treasurer to bring to the attention of all component county society secretaries the desirability of placing this subject on the calendars of meetings of such societies for discussion by the



members. That upon the completion of such survey the Council make such use of the survey as it deems advisable in order to aid and assist charitable and benevolent people and communities who desire to use the information for the relief and the interest of the indigent poor.

The chairman of the Reference Committee then moved for the adoption of the foregoing recommendations; such motion was duly seconded and unanimously carried.

(f) *Committee on Industrial Medicine.*—In previous years the Committee on Industrial Practice, under its present chairman, has submitted able and extensive reports on its activities. During the last year nothing of special interest has been referred to the committee.

(g) *Committee on Medical Defense.*—Your committee commends the report of the Committee on Medical Defense, especially its recommendation of the desirability of optional medical defense, which is now being taken advantage of by over seven hundred of our members. This matter as presented to the House of Delegates by our very able counsel, Mr. Hartley Peart, should be called to the attention of members to the end that membership in optional defense be greatly increased.

(h) *Committee on Membership and Organizations.*—In considering the report of the Committee on Membership and Organizations, your committee is gratified to learn that last year more doctors affiliated themselves with the Association than in any previous year, but we also recognize the fact that a large number of eligible physicians in California are not members. While we appreciate and commend the work of the committee, we urge that further efforts be made to increase the membership of our Association.

(i) *Committee on Publications.*—The high standard of the journal and the directory are the best commendation of the work of the Committee on Publications. The first publication of the Pre-Convention Bulletin has more than justified its inauguration. Your committee recommends that the Council consider the suggestions offered for additional information in the directory and take such action thereon as it feels is pertinent.

The chairman of the Reference Committee then moved for the adoption of the foregoing section; such motion was duly seconded and unanimously carried.

(j) *Committee on Public Policy and Legislation.*—We have considered the report of the Committee on Public Policy and Legislation and we recommend a vote of commendation to the members of this committee who have worked so ardently and so faithfully on behalf of the best interests of this Association.

The chairman of the Reference Committee then moved for the adoption of the foregoing section; such motion was duly seconded and unanimously carried.

(k) *The Committee on Scientific Work.*—The character of the programs presented at the last few meetings speak for themselves, and we suggest that the Program Committee be thanked for the high class of scientific work it has brought before this Association.

The chairman of the Reference Committee then moved for the adoption of the recommendation thanking the Program Committee; such motion was duly seconded and carried.

(l) *Special Committees.*—Two special committees, namely, the Committee on Clinical and Research Prize Awards, and the Committee on Medical Practice and Basic Science Acts, have given much time and thought to the studies of the problems of their respective committees and deserve the gratitude of the Association.

The chairman of the Reference Committee then moved for the adoption of the recommendation thanking the Committee on Clinical and Research Prizes and the Committee on the Medical Practice and Basic Science Acts; such motion was duly seconded and unanimously carried.

Joseph M. King, chairman of the Reference Committee on Reports of Officers and Standing Committees, then moved for the adoption of the report as a whole; such motion was seconded by George G. Hunter and unanimously carried.

Doctor King then moved that a vote of thanks be given Mrs. Talbot for the assistance rendered the committee; such motion was duly seconded and carried.

\* \* \*

In accordance with the action of the House of Delegates, Dr. John H. Graves, chairman of the Committee on Medical Economics, was invited to address the House. Doctor Graves spoke of the outlook of the doctor if state medicine is inaugurated in California, as follows:

#### REQUESTED ADDRESS OF CHAIRMAN OF COMMITTEE ON MEDICAL ECONOMICS TO HOUSE OF DELEGATES

"I have in my possession a copy of an act properly prepared for presentation to the next legislature of this state, with the prediction that it will pass, that proposes to administer and conduct medical activities in this state just as the educational activities are administered and conducted.

"Full-time salaries for all physicians and surgeons range, like those of school teachers, from \$150 to \$300 per month; private physicians will be permitted, but the legal charge for services of the physician and surgeon are on a time basis, the maximum of which is \$10 per hour. So that an operation that would require thirty minutes would net the surgeon but \$5 and an obstetrical case of one-half hour would net the physician \$5; a consultation of fifteen minutes would net the consultant \$2.50; however an allowance is made for transportation to and from the patient's home.

"Are you interested in preventing the passage of this and similar acts?

"Do you think the character of the service rendered the poor will be improved by the passage of this act?

"Will you be satisfied to continue your practice under these conditions?

"If you are not, listen attentively to what I am going to say.

"For some time there have appeared in the magazines and the newspapers frequent articles on the high cost of sickness and what should be done to lessen that cost.

"It is claimed that while the rich receive adequate medical treatment because they have the means to pay for it, and the poor receive adequate care because they do not have to pay for it, that the large army of salary-earning, home-owning American citizens, known as the white collar brigade, are unable to meet the excessive cost of sickness, partly at least because of the exorbitant fees of the medical profession.

"One year ago I was appointed chairman of your Committee on Medical Economics. I received the news of my appointment in New York City, where I began immediately the collection of data bearing on this important point.

"I proceeded to Washington, D. C., where my work was continued and I returned to California where a considerable portion of my time, together with that of other members of my committee, has been given to the study of this problem in an earnest effort to collect the necessary data on which to build a system of rendering medical service that would place the doctor in a sound economic condition and at the same time relieve the strain on those requiring medical service.

"That report, which you will probably never see, and probably never hear, but which was filed with the councilors of this Association, was based upon the following investigations:\*

"1. Experience of foreign countries in health insurance.

"2. Investigations of the health at time of original examination and the diseases and their duration, of

\* Full report will be published in July issue.



five millions of men enlisted by the United States for services in the World War.

"3. Study of incidence of illness, duration of the disability, and the cost of hospitalization and treatment of various selected groups in manufacturing, industrial and transportation activities.

"4. Investigation of certain mutual benevolent hospital associations that were founded and conducted with money secured by endowments, entrance or initiation fees; and by monthly payment of dues.

"5. Frequency, duration and character of illness of certain groups of children of school age.

"6. The cost of sickness to three thousand families from January 1 to July 1, a period of six months.

"Certain conclusions were drawn therefrom, which those of you who happen to possess a copy of the Pre-Convention Bulletin may read on page 27 thereof. Dr. John Ruddock, chairman of the Committee on Clinics, and who spent nearly two years investigating this subject which bears directly on this issue, after taking weeks and weeks of time preparing this report had no place on the program of this meeting, and when he was finally sandwiched in on Monday night, I listened with dismay at his efforts to present to you the fruits of two years work in fifteen minutes; an effort obviously futile.\*

"Gentlemen of the House of Delegates, something is wrong with the medical society of California. Matters of such importance can no longer be side-tracked to consider allergic infantile colic, the pathology of hay fever, or the significance of postural tensions for normal and abnormal human behavior, or exteroceptive streams of mentation.

"Gentlemen, it is a rapidly moving age. No man can engage in umbilical contemplation with the automotive procession passing him by.

"My appeal is this: That proper provision be made upon the program for the proper presentation of this subject and I urge especially, gentlemen, upon your return to your homes, that you will arrange with your county society to devote at least three meetings for the presentation of this or allied subjects.

"Such men as Dr. Rexwald Brown, Dr. Walter Coffey, Dr. Daniel Crosby, Dr. Cushman, Dr. DeLappe, Dr. Yoell, and many others who are deeply interested in these matters will be glad to come to your assistance in your deliberations, so that we may proceed with energy, but with caution; with enthusiasm, but with wisdom; to study every suggestion and every plan that we may create a system of delivering medical service to the mass that will not slit the throat of progressive medicine or assassinate the economic life of the doctor.

"The 'Act' mentioned was imaginary and only used to direct your attentions to the possibilities of the present situation." \* \* \* \* \*

Dr. Rodney Yoell of San Francisco stated that certain groups of sociologists are now preparing an act which would probably bring about the conditions which Doctor Graves outlined.

Doctor Duffield stated that Doctor Graves' message should be given to every county unit.

On motion duly made and seconded, it was

Resolved, That the Council be requested at the next session to arrange for a general session for the discussion of these matters and in the meantime the Council use every endeavor to get this information into the hands of the members of the Association.

John C. Ruddock offered the following amendment to the resolution, which was accepted.

That Doctor Graves' report be ordered printed with the report of the survey on clinics and sent to every member of the State Association.

The speaker then called for objections. Motion carried as amended.

William Duffield of Los Angeles moved that a rising vote of thanks of the House of Delegates be given Doctor Graves for his work, and especially for

his willingness in coming before the House this evening and presenting the subject in this manner; such motion was duly seconded and carried.

\* \* \*

**XI. Report of the Reference Committee on Resolutions and New and Miscellaneous Business.**—H. A. L. Ryfkogel, chairman of the Committee on Resolutions and New and Miscellaneous Business then presented the report of his committee.

H. A. L. Ryfkogel  
Percy T. Phillips  
F. C. E. Mathison.

(a) *Resolution No. 1. Death of Dr. William T. McArthur.*—The Reference Committee recommends the adoption of this resolution. Doctor Ryfkogel then moved for the adoption of the resolution; such motion was duly seconded and unanimously carried.

(b) *Resolution No. 2. Narcotic Addicts.*—The Reference Committee recommends the adoption of this resolution. Dr. Ryfkogel then moved for the adoption of the resolution; such motion was duly seconded and carried.

(c) *Resolution No. 3. Report of Committee on Hospitals, Dispensaries, and Clinics.*—The Reference Committee recommends the adoption of this resolution. Doctor Ryfkogel then moved for the adoption of the resolution; such motion was duly seconded and carried.

(d) *Resolution No. 4. Intoxicating Liquors.*—The Reference Committee feels that, since the subject-matter of this resolution involves the opinions of so many which of necessity must be varied, it should make no recommendation.

Rodney Yoell of San Francisco moved that the resolution be amended to include "that the ballot be sent within thirty days"; such motion was seconded by Joseph Catton of San Francisco.

Katherine Close of Los Angeles moved that the resolution on use of intoxicating liquors be placed on the table; such motion was duly seconded. A rising vote was then taken on the motion to table. Motion carried.

(e) *Resolution No. 5. Tax Exemption for Nonprofit Hospitals.*—The Reference Committee recommends the adoption of this resolution. Doctor Ryfkogel then moved for the adoption of the resolution; such motion was duly seconded and carried.

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**XII. Presentation of the President.**—The speaker asked President Morton R. Gibbons to take the chair. Doctor Gibbons took the chair and appointed as escorts to the incoming president, James F. Macpherson, and Charles M. Fox of San Diego. Lyell C. Kinney was then presented to the House, and thanked the Association for the honor conferred on him. Doctor Kinney suggested that the Council give further consideration of the question of medical economics during the next year.

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**XIII. Presentation of the President-Elect.**—William Duffield escorted Junius Brainard Harris to the platform. Doctor Harris expressed his appreciation of the high honor conferred upon him.

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**XIV. Resolution.**—John Homer Woolsey of San Francisco moved that all reference to the resolution presented by A. J. Scott be deleted from the minutes; such motion was seconded by Fred R. DeLappe, and carried.

\* \* \*

**XV. Reading and Adoption of the Minutes.**—The minutes of this second meeting were then read, and there being no objection were approved.

\* \* \*

**XVI. Adjournment.**—There being no further business the meeting adjourned.

\* Full report will be published in July issue.



## COUNCIL MINUTES

Minutes of the One Hundred and Eighty-Seventh  
Meeting of the Council of the California  
Medical Association*Approved at the One Hundred and Eighty-Ninth  
Meeting of the Council of the California  
Medical Association, April 27, 1930*

Held in the offices of the Association, Room 2004, 450 Sutter Street, San Francisco, Saturday, January 18, 1930, at 10 a. m.

**Present.**—Drs. Gibbons, Kinney, Palette, Hamlin, Duffield, DeLappe, Phillips, Coffey, Harris, Rogers, Hunter, Cushman, Kress, Catton, Kelly, Peers, Pope, and General Counsel Peart; and John H. Graves, chairman of the Medical Economics Committee.

**Absent.**—Drs. Arnold and Moseley.

1. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

2. **Minutes of the Council.**—Minutes of the 186th meeting of the Council were presented for approval. The chairman stated that since the minutes had been mailed to all councilors, if there were no objections, he would entertain a motion for their approval without further reading.

Action by the Council.—On motion of Palette, seconded by DeLappe, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 186th meeting of the Council, as mailed to all councilors, be approved.

3. **Minutes of the Executive Meeting.**—Minutes of the 116th and 117th meetings of the Executive Committee were presented for approval. The chairman stated that since the minutes had been mailed to all councilors, if there were no objections, he would entertain a motion for their approval, without further reading.

Action by the Council.—On motion of Duffield, seconded by Kress, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 116th and 117th meetings of the Executive Committee, as mailed to all councilors, be approved.

4. **Retired Members.**—Article IV of the Constitution, which states that the dues of retired members shall be fixed by the Council, was called to the attention of the Council. It was felt that since this retired status was given in recognition of long membership in the Association, no dues should be assessed.

Action by the Council.—On motion of Kress, seconded by Palette, and unanimously carried, the following resolution was adopted:

Resolved, That no dues be charged retired members.

5. **William LeMoyne Wills.**—The secretary advised that William LeMoyne Wills, former president of the Association, was at present an honorary member of the Los Angeles County Medical Association, but held no membership status in the State Association.

Action by the Council.—On motion of Duffield, seconded by Peers, and unanimously carried, the following resolution was adopted:

Resolved, That William LeMoyne Wills, former president of the California Medical Association, be granted honorary membership in the Association.

6. **M. W. Fredrick.**—Letter from the San Francisco County Medical Society stating that M. W. Fredrick had been granted retired membership in the county society and recommending that he be granted the same status in the State Association was presented.

Action by the Council.—On motion of Duffield, seconded by Kinney, and unanimously carried, the following resolution was adopted:

Resolved, That M. W. Fredrick, member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association.

7. **Invited Guests.**—Dr. T. Henshaw Kelly, chairman of the Arrangements Committee for the 1930 annual meeting, reported on the invited guests, stating that invitations had been extended and acceptances received from Dr. W. McKim Marriott, St. Louis; Dr. Fred Weidman, Philadelphia; and Dr. A. U. Desjardins, Minnesota. Mr. Chester Rowell had been invited to address the Association on some phase of the question of the cost of medical care and, although no definite acceptance had been received on account of his absence from the city, it was very probable that he would accept.

Discussion was then had of the number of general sessions to be held at Del Monte, and it was decided that at least three general sessions should be held.

Discussion of the question of inviting Dr. Morris Fishbein to speak before one of the general sessions was had.

Action by the Council.—On motion of Duffield, seconded by Peers, the following resolution was adopted:

Resolved, That Dr. Morris Fishbein be invited to address the Association at one of the general sessions of the annual meeting at Del Monte.

8. **Medical Service Plans.**—Dr. John H. Graves, chairman of the Medical Economics Committee, stated that Dr. Martin M. Ritter of Los Angeles had gathered actuarial statistics on the cost of operation of a medical service plan which he was organizing in Los Angeles, and that he had been invited to address the Council. Doctor Ritter then spoke on the plan, which he stated had the coöperation of some of the wealthiest men in the South. The plan embodied furnishing medical care to the middle classes at a reasonable fee, with justice to both the hospital and the doctor, according to Doctor Ritter's statement. Doctor Ritter stated that the initiation fee was \$5 and if upon examination the applicant was found to be in an unhealthy condition the \$5 was returned and he was referred to his family physician; that yearly dues were \$24, payable annually, semiannually, or monthly; that a yearly examination was required; that the patient had the choice of his own physician and his own hospital; that if he desired extra facilities at the hospital, he would be permitted the usual allowance by the company and would pay the difference himself; and that the requirements for physicians were that they be graduates of a recognized school of medicine. Doctor Ritter stated that the organization would have a lay board of managers and that it was formed under the law for nonprofit corporations.

Action by the Council.—On motion of Kress, duly seconded and unanimously carried, it was

Resolved, That a vote of thanks be accorded Doctor Ritter and that Doctor Graves and his committee be instructed to get in further touch with Doctor Ritter.

Dr. Rodney Yoell of San Francisco then addressed the Council outlining a plan for medical service which had been presented to the Commonwealth Club. The plan embodied the idea of levying a state tax to care for the medical requirements of individuals. The money collected would be placed in a fund and utilized to buy insurance.

It was felt that it would be well to have the plan outlined by Doctor Yoell put in form for presentation to and study by all councilors.

Action by the Council.—On motion of Kress, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That a vote of thanks be accorded Dr. Rodney Yoell.

Doctor Graves was instructed to secure an outline of Doctor Yoell's plan so that it could be mimeographed and mailed to all councilors.

9. **Tax Exemption of Nonprofit Hospitals.**—Mr. G. W. Curtis, general chairman of the Committee on Tax Exemption of Nonprofit Hospitals, outlined to the Council the merits of the plan for tax exemption



of nonprofit hospitals and stated that the general committee was very anxious to have the Association endorse the measure when it comes up at the next general election. The question was then discussed by the Council.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was adopted:

Resolved, That the California Medical Association endorse the measure for the tax exemption of nonprofit hospitals.

10. **Budget.**—Budget of estimated expenses for the year 1931-32, as prepared by the Auditing Committee and revised by the Executive Committee, was presented.

It was the sense of the Council that the budget be brought up for further consideration at the first meeting of the Council at the Del Monte session.

11. **Commercial Exhibits.**—The secretary stated that she had received a visit from a member of the management of the Hotel Del Monte, who had discussed the question of exhibits at the annual meeting at Del Monte and that a satisfactory room on the second floor had been provided for the commercial exhibit.

12. **Principles of Professional Ethics.**—Letter from Doctor Kress regarding the printing of the principles of professional ethics was referred to the Executive Committee.

13. **Professional Services of Doctors to Each Other.** Discussion was had of the case of professional services rendered by one member of the Alameda County Society to another member. Doctor Hamlin reported that the Council of the Alameda County Society was investigating the case and that it was very probable the suggestion that settlement be made by arbitration through a committee of three would be followed out.

Action by the Council.—On motion of Harris, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That the progress report of Doctor Hamlin be accepted and that the Alameda County Medical Association report further on its investigations.

14. **Narcotic Prescriptions.**—Discussion was had of the present situation regarding the enforcement of the Narcotic Law.

Doctor Kelly presented a letter which had been prepared in accordance with the resolution of the Executive Committee, which was to go to all members of the State Association advising them of the law regarding written narcotic prescriptions.

Action by the Council.—On motion of Hunter, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That the letter be revised by Doctor Kelly and Mr. Peart and that it be sent to all members of the State Association in conformity with the resolution of the Executive Committee and that copies be sent to both the northern and southern offices of the pharmaceutical association.

15. **Proposed Amendment to the Dental Law.**—Correspondence from Doctor Pinkham regarding the proposed amendment to the dental law to permit the use of veronal, barbital, etc., by dental surgeons under the same provisions as physicians was presented.

Action by the Council.—On motion of Catton, seconded by Kinney, and unanimously carried, the following resolution was adopted:

Resolved, That the correspondence be referred to the Committee on Public Policy and Legislation for study and report.

16. **American Medical Association Economics Council.**—Letter from Doctor Kress suggesting that the House of Delegates of the California Medical Association pass a resolution recommending the forma-

tion of a Council on Medical Economics of the American Medical Association was presented.

The correspondence was referred to the Executive Committee for report at the first meeting of the Council at Del Monte.

17. **Committee on Associated Groups and Affiliated Societies.**—Resolution of the Executive Committee recommending that the resignation of Dr. T. Henshaw Kelly be accepted from the Committee on Associated Societies and Technical Groups and that Dr. George H. Kress be appointed to fill the unexpired term was called to the attention of the Council.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was adopted:

Resolved, That the resolution of the Executive Committee be adopted and that Doctor Kress serve as a member of the Committee on Associated Societies and Technical Groups for the unexpired term of Doctor Kelly.

18. **Radio Broadcasting.**—Dr. T. Henshaw Kelly submitted a progress report on the investigations being carried on by the Committee on Radio Broadcasting. Doctor Kelly stated that the committee was desirous of securing a hook-up with one of the larger stations, KGO-KFI or KFRC-KCA. Doctor Kelly stated that the National Broadcasting Corporation was initiating an educational program and he had hoped to be able to have them include the medical broadcasting in this program, but this did not seem possible at the present time. Doctor Kelly stated that unless one of the larger stations could be secured it would be best to abandon the plan. Doctor Kelly stated that it was his plan at present to appoint his subcommittees as authorized and prepare his program, which would then be submitted to the manager of National Broadcasting Corporation.

Action by the Council.—On motion of Duffield, seconded by Kinney, and unanimously carried, the following resolution was adopted:

Resolved, That the progress report of Doctor Kelly be accepted.

19. **Woman's Auxiliary.**—Doctor Kress stated that he felt that the formation of the various county auxiliaries would be materially benefited if a small pamphlet giving the purposes of the auxiliary, rules governing, etc., was published for distribution.

Action by the Council.—On motion of Kress, seconded by Pallette, and unanimously carried, the following resolution was adopted:

Resolved, That the Committee on Associated Societies and Technical Groups be authorized to publish and distribute a pamphlet containing the rules and purposes of the Woman's Auxiliary in such number as it sees fit.

20. **Canvass of Votes on Incorporation.**—The secretary reported on the formal canvass of votes on incorporation stating that the membership as of December 1, 1929 was 4809; the total votes cast, 3440; the total votes cast for incorporation 3276 and the total votes cast against incorporation 164; giving a surplus of 33 votes over a two-thirds vote.

Action by the Council.—On motion of Kress, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That the canvass of votes on incorporation by the Executive Committee be accepted and approved and that the Council proceed in accordance with the resolution passed at the 185th meeting, to form the corporation.

Mr. Peart then presented a draft of Articles of Incorporation, and it was the sense of the Council that copies be sent to all councilors. Mr. Peart stated that he had been working on the by-laws but as yet had no written draft to submit for want of information as to clauses desired.

Action by the Council.—On motion of Kress, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That the president of the Association, the chairman of the Executive Committee, and the general counsel be constituted a committee to prepare the by-laws for the proposed incorporation and report to the Executive Committee and the Council.

It was stated that copies of the by-laws should be sent to all members of the Council, when prepared.

21. **Los Angeles Hospital.**—Doctor Kress reported on the condition of the Los Angeles Hospital relating to clinic and out-patient departments.

Action by the Council.—On motion of Kress, seconded by Peers, and unanimously carried, the following resolution was adopted:

Resolved, By the Council of the California Medical Association that, in its opinion, public hospitals of California supported by taxation should not maintain certain institutional activities in the care of the indigent sick, when such activities might ultimately lead to ill results to the public health and to medical science standards; and be it further

Resolved, That in the viewpoint of the Council of the California Medical Association, when public hospitals such as county hospitals maintain out-patient or dispensary departments, and charge admission or treatment fees to such patients, that then such out-patient departments of public hospitals could and in nearly all instances should very properly refer all out-patients, with the exception of indigent patients who can pay nothing, and of other special classes listed below, to other out-patient dispensaries or institutions of good reputation in the same communities, when such exist. The exceptions being: (1) ambulant patients who have been in-patients, on whom it is desirable to have a follow-up supervision; (2) out-patients suffering from conditions liable to shortly make them possible in-patients. In the opinion of the California Medical Association, California law intends county hospitals to supply professional services and hospitalization only to the indigent sick and injured, and county hospitals existing under the general California law should observe this fundamental rule and law.

22. **Editorials.**—Doctor Kress stated that he wished to include an editorial on the January issue of the Survey Graphic. Doctor Kress stated that at the annual Conference of Secretaries Dr. Harry M. Hall presented an article on "Descartes Was Right," and if there were no objections he would like to publish the article in the journal. No objection.

23. **Medical Service Plan.**—Doctor Coffey stated that the San Joaquin County Society was desirous of having him speak to the members at Stockton regarding the medical service plan. Doctor Hunter stated that he believed this plan should be discussed before the different societies by persons competent to present the plan.

Action by the Council.—On motion of Hunter, duly seconded, and unanimously carried, the following resolution was adopted:

Resolved, That the Council authorize the Executive Committee to delegate certain men whom it feels are qualified by reason of judgment to appear before the county units throughout the state and present the plan for medical service.

The letter to the Medical Economics Publishing Company was referred to Doctor Kelly for answer that plans were not definite as yet.

24. **Pischel Correspondence.**—Correspondence regarding certain optometry matters was discussed and it was decided that the letters be not published.

25. **Board of Medical Examiners.**—As chairman of the Committee on Public Policy, Dr. Junius B. Harris reported on the recent changes in personnel of the Board of Medical Examiners.

It was the sense of the Council that Doctor Harris be authorized to express the appreciation of the Association to the Governor.

26. **Basic Science Act Committee.**—Dr. George H. Kress, chairman of the Committee on the Medical Practice Act and possible Basic Science Act, presented the report of his committee. Dr. Kress stated that a suggested basic science act had been prepared by the southern members of the committee for distribution to councilors and for study and suggestions.

Action by the Council.—On motion of Kress, seconded by Duffield, and unanimously carried, it was

Resolved, That the matter of a basic science act be placed on the docket for the March 1 meeting of the Council.

27. **Meeting of the Council.**—The advisability of holding a special Council meeting for consideration of the medical service plan was discussed.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was adopted:

Resolved, That a special meeting of the Council be held on Saturday, March 1, at the home of Doctor Kress, Los Angeles.

Action by the Council.—On motion of Kelly, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That the docket for the March 1 Council meeting be kept clear for consideration of the medical service plan and the basic science act.

28. **Medical Service Plan.**—The general counsel stated that he had made further investigations of types of hospital associations. Mr. Peart then presented a written memorandum of his investigations of the possibilities of carrying out the plan under a corporation formed by others than members of the Association under the Civil Code, Title 12.

It was suggested that the general counsel have his plans for carrying out the medical service plan in more or less definite form for the March 1 meeting.

The general counsel informed the Council that, in accordance with authorization from the Executive Committee, he had called in outside counsel on the question. It was stated that the question of special fee for the investigations of the general counsel and his outside counsel had not yet been discussed.

29. **Adjournment.**—There being no further business the meeting adjourned.

OLIVER D. HAMLIN, *Chairman.*  
EMMA W. POPE, *Secretary.*

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### Minutes of the One Hundred and Eighty-Eighth Meeting of the Council of the California Medical Association

*Approved at the One Hundred and Eighty-Ninth Meeting of the Council of the California Medical Association, April 27, 1930*

Held at the home of Dr. George H. Kress, Santa Monica Canyon, Los Angeles, Saturday, March 1, 1930, at 11 a. m.

**Present.**—Drs. Gibbons, Kinney, Pallette, Hamlin, Arnold, Duffield, DeLappe, Phillips, Coffey, Harris, Rogers, Hunter, Cushman, Kress, Catton, Kelly, Peers, Pope, and General Counsel Peart; and chairman of the Medical Economics Committee, John H. Graves.

**Absent.**—Doctor Moseley.

1. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

2. **Medical Service Plan.\***—Dr. John H. Graves, chairman of the Medical Economics Committee, sub-

\* Full report will be published in July issue.



mitted a written report containing medical service costs to specified groups in England; and also in the United States. It was suggested that a digest of the report be made for distribution to members of the House of Delegates and the Council. However, Doctor Graves stated that some of the figures contained in the report were confidential and had been secured under the agreement that they would not be published at the present time.

Action by the Council.—On motion of Kinney, seconded by Pallette, and unanimously carried, the following resolution was adopted:

Resolved, That it is the sense of the Council that Doctor Graves be asked to present to the Council at Del Monte such figures as can be released and his conclusions, in the form of a digest suitable for printing and for distribution among the delegates.

Doctor Graves stated that he might make suggestions but that he did not feel that he would want to make any recommendations, and that he would endeavor to prepare a digest of such facts as could be released.

Doctor Graves then stated that at the time Doctor Ritter had been invited to address the Council on his medical service plan it was understood that one-half of his expenses from Los Angeles to San Francisco and return would be paid by the Association.

It was the sense of the Council that the payment of \$34.17 be authorized, being one-half of the expense of Doctor Ritter's trip from Los Angeles to San Francisco and return.

3. **Noon Adjournment.**—On motion duly made and seconded, adjournment was taken for luncheon.

4. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin; all members who attended the morning session being present.

5. **Medical Service Plans.**—The General Counsel submitted a written opinion on the possibilities of furnishing medical, surgical, and hospital services to persons whose incomes are less than \$2500 per annum by means of a medical and surgical staff composed of those members of the Association who desire to render such services in consideration of payment of a monthly assessment by the prospective patient.

The opinion brought out the fact that, although such service could legally be given under a copartnership, it would be unethical and illegal to solicit business, directly or indirectly, as provided in Section 14, Subsection 12 of the Medical Practice Act. Discussion was then had.

Dr. Morton R. Gibbons then presented a statement of legal costs involved in the investigations of the insurance, medical service and hospital laws and discussion in connection with the proposed plan, covering fee for McCutchen, Olney, Mannon & Greene, called in consultation, and fee for the general counsel of the Association, as authorized by the Council at a previous meeting.

Action by the Council.—On motion of Kinney, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That the bill as submitted be approved.

Doctor Gibbons then stated that on account of lack of precedent, difficulties in arriving at costs and other details; obstacles involved in administration and the seeming departure from ethical standards to meet difficulties in a limited field with a resultant breaking down of the barriers in the whole field; opposition from cults and others because of the plan being limited to members of the California Medical Association and a certain class of beneficiary, he would vote to abandon the attempt to immediately put into effect a health insurance plan but would approve of a con-

tinuance of research which would be of utmost value for future reference.

Action by the Council.—On motion of Kelly, seconded by Hunter, the following resolution was submitted for discussion:

Resolved, That Doctor Gibbons' opinion be the sense of this Council.

Action by the Council.—On motion of Kress, seconded by Coffey, it was

Resolved, That Doctor Kelly's motion be laid on the table.

Discussion then ensued and Doctor Gibbons stated that he would withdraw his opinion.

Doctor Kress suggested that a special committee be appointed to investigate the type of legislation necessary to amend the statutes so that the Association would be permitted to proceed with a plan.

Doctor Duffield introduced the following motion, which was duly seconded:

Resolved, That Doctor Graves' committee be instructed to continue the study of this matter.

With the consent of Doctor Duffield and his second, the following was offered by Doctor Kress as a substitute motion:

Resolved, That a special committee, consisting of the president of the society, Doctor Gibbons; the president-elect, Doctor Kinney, the chairman of the Council, Doctor Hamlin; the chairman of the Executive Committee, Doctor Kelly; Doctor Graves and Doctor Coffey, with Mr. Peart in consultation, be appointed and that this be constituted a committee of this Council to pursue the special investigations.

It was stated that Doctor DeLappe, who spoke of a plan of medical care through county hospitals, should be invited to meet with the committee.

Action by the Council.—After discussion, the motion of Doctor Kress was unanimously carried.

Doctor Catton then suggested that the two questions of "liability" and "solicitation" be submitted to a vote. No action taken.

Discussion was then had of the advisability of calling a special meeting of the Council prior to the annual meeting for discussion of the medical service plan.

Action by the Council.—On motion of Kress, seconded by Coffey, it was

Resolved, That a special meeting of the Council be called on April 12 for consideration of the medical service plan and other business which may come up.

A vote was then taken on the motion. Yeas, 5; noes, 6; motion defeated.

Action by the Council.—On motion of Hunter, seconded by Kelly, and unanimously carried, it was

Resolved, That the Council meet at 2 p. m. Sunday, April 27, at Del Monte at which meeting the medical service plan shall be considered further.

Discussion was then had as to the advantage of such a medical service plan over other types of health associations and medical service plans, and Doctor Hunter was asked to prepare a statement presenting his viewpoints and basic contentions.

6. **Basic Science Act.**—Dr. George H. Kress, chairman of the Committee on the Medical Practice Act and the Proposed Basic Science Act, called the attention of the Council to the report of his committee, suggesting that the report be studied so that some conclusions could be reached at the next Council meeting.

7. **Adjournment.**—There being no further business the meeting adjourned.

OLIVER D. HAMLIN, *Chairman.*  
EMMA W. POPE, *Secretary.*

**Minutes of the One Hundred and Eighty-ninth  
Meeting of the Council of the California  
Medical Association**

*Approved at the One Hundred and Ninetieth Meeting  
of the Council of the California Medical  
Association, April 28, 1930.*

Held in Room 723, Hotel Del Monte, Del Monte, California, Sunday, April 27, 1930 at 2:30 p. m.

**Present.**—Doctors Gibbons, Kinney, Pallette, Arnold, Duffield, DeLappe, Phillips, Hamlin, Harris, Rogers, Hunter, Cushman, Kress, Kelly, Peers, Pope, and General Counsel Peart.

**Absent.**—Doctors Moseley, Coffey, and Catton.

1. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

2. **Minutes of the Council.**—The chairman stated that the minutes of the 187th and 188th meetings of the Council had been mailed to all councilors and if there were no objections, he would entertain a motion for their approval without further reading.

Action by the Council.—On motion of Kinney, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 187th and 188th meetings of the Council, as mailed to all members, be approved.

3. **Minutes of the Executive Committee.**—The chairman stated that the minutes of the 118th and 119th meeting of the Executive Committee had been mailed to all members of the Council.

Action by the Council.—On motion duly made and seconded, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 118th and 119th meetings of the Executive Committee, as mailed to all councilors, be approved.

4. **Medical Service Plan.**—Doctor Hunter submitted a letter on medical service, which was referred to the Committee on Medical Economics.

Discussion was had as to the advisability of continued study of the problem of adequate medical care of persons of limited incomes. Doctor Hunter stated that without any thought of developing any particular plan, the Committee on Medical Economics should be instructed to continue its study of the various phases of this subject and present to the Council from time to time such suggestions and plans as it may evolve.

Action by the Council.—On motion of Kress, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That the matter of the medical service plan be laid on the table for consideration at a future meeting of the Council at the Del Monte session.

5. **Correspondence from Doctor Day.**—Letter addressed to the chairman of the Council by Dr. Robert V. Day requesting that financial statements of the Association be furnished county society officers, was read. It was pointed out that the financial records of the Association were open to inspection of all members. After discussion, it was decided that distribution throughout the state was inadvisable.

Amendment to Section 11 of Article 10 of the Constitution as submitted by Doctor Day was read.

Action by the Council.—On motion of Pallette, seconded by Kelly and unanimously carried, the following resolution was adopted:

Resolved, That the communication be received, and that action there on be deferred until the meeting of the Council on Thursday.

6. **Council Docket.**—Doctor Kelly stated that he was in favor of combining the first and second meetings of the Council and dispensing with the 8 p. m. session.

Action by the Council.—On motion of Kelly, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That the Council combine the order of business of the first and second meetings of the Council and dispense with the evening meeting.

7. **Basic Science and Medical Practice Acts.**—Discussion was had of the advisability of amending the Medical Practice Act. Doctor Kress stated that amendment of the act seemed impractical at this time except on the point of internship as discussed last year by the deans of the University of California, Stanford, College of Medical Evangelists and the Board of Medical Examiners, which would provide that medical students from other states must serve the equivalent of one year's internship before taking examination for license to practice. It was pointed out that it was desirable to study the legislative procedures necessary for such amendment of the act and that the viewpoints of the deans of the universities and the Board of Medical Examiners should be obtained.

Action by the Council.—On motion of Kress, seconded by Kelly and unanimously carried, the following resolution was adopted:

Resolved, That the matter of the amendment of the Medical Practice Act be referred to the Committee on Public Policy and Legislation for study and report at the fall meeting of the Council.

8. **Basic Science Act.**—Doctor Kress, chairman of the Special Committee on the Basic Science Act, submitted a progress report of his committee, stating that the term "Qualifying Certificate" would probably be a better title for the act than Basic Science Law. Doctor Gibbons then presented his views on the proposed law.

Action by the Council.—On motion of Gibbons, seconded by Kelly, and carried, the following resolution was adopted:

Resolved, That the matter of a proposed Basic Science Law be dropped.

Action by the Council.—On motion duly made and seconded, the following substitute motion was then offered and unanimously carried:

Resolved, That the proposed Basic Science Act be referred back to the committee and that the northern and southern groups study the whole question and report to the Council at a future meeting.

9. **Order of Business.**—In accordance with the constitution's provision, the Council discussed the order of business for the first two meetings of the House of Delegates, which was amended as follows:

**FIRST MEETING**

**ORDER OF BUSINESS**

1. Call to order.
  2. Report of the speaker on personnel of Credentials Committee and two Reference Committees.
  3. Report of the Credentials Committee and roll call.
  4. Report of the president, Morton R. Gibbons.
  5. Report of the Council, Oliver D. Hamlin, Chairman.
  6. Report of the Auditing Committee, T. Henshaw Kelly, Chairman.
  7. Report of the secretary, Emma W. Pope.
  8. Report of the editors, George H. Kress, Emma W. Pope.
  9. Report of the general counsel, Hartley F. Peart.
  10. Unfinished business.
  11. New business (Introduction of resolutions).
  12. Reading and adoption of minutes.
- Adjournment.

**SECOND MEETING**

**ORDER OF BUSINESS**

1. Call to order.
2. Roll call.



3. Announcement of place of session, 1931.
4. Election of:
  - (a) President-elect.
  - (b) Speaker of the House of Delegates.
  - (c) Vice-Speaker of House of Delegates.
  - (d) Councilors:
    - Second District, Incumbent—William Duffield, Los Angeles (1930).
    - Fifth District, Incumbent—Alfred Phillips, Santa Cruz (1930).
    - Eighth District, Incumbent—Junius B. Harris, Sacramento (1930).
    - Councilors-at-large—Incumbents:
      - Ruggles A. Cushman, Santa Ana (1930).
      - T. Henshaw Kelly, San Francisco (1930).
  - (e) Delegates and alternates to the American Medical Association for sessions of 1931-1932.
    - Incumbents:
      - Delegates—Victor Vecki, San Francisco; Percy T. Magan, Los Angeles; Junius B. Harris, Sacramento.
      - Alternates—William E. Stevens, San Francisco; Chas. D. Lockwood, Pasadena; John Hunt Shephard, San Jose.
5. Report of Reference Committee on reports of officers and standing committees.
6. Report of the Reference Committee on Resolutions and new business.
7. New business.
8. Presentation of president.
9. Presentation of the president-elect.
10. Reading and adoption of minutes.
- Adjournment.

Action by the Council: On motion of Kinney, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That the printed order of business for the first two meetings of the House of Delegates, as amended, be accepted.

**10. Death of Doctor McArthur.**—The secretary read a resolution on the death of Dr. William T. McArthur as prepared by Doctor Duffield.

Action by the Council.—On motion duly made and seconded, and unanimously carried, the following resolution was adopted:

Resolved, That the resolution on the death of Doctor William Taylor McArthur be presented at the first meeting of the House of Delegates.

Doctor Duffield was appointed to present the resolution.

**11. Budget.**—Dr. T. Henshaw Kelly, Chairman of the Auditing Committee presented a budget of receipts and expenses for 1931. Doctor Kelly stated that in the past it had been the custom of the Association to allow the medical society of the county wherein the annual meeting was held to stand the expenses of the meeting. Because of this only the larger societies were able to invite the Association to hold meetings in their counties. Since the financial status of the Association is on a sound basis, Doctor Kelly suggested the expense of annual meetings be borne by the Association. It was the sense of the Council that expenses of annual meetings be paid by the Association in the future.

Action by the Council.—On motion of Kelly, seconded by Harris, and unanimously carried, the following resolution was adopted.

Resolved, That the budget as amended be accepted.

**12. Incorporation.**—The General Council stated that the Articles of Incorporation and By-Laws had been mailed to all officers and councilors. Mr. Peart then read the articles section by section. The matter of cumulative voting was discussed and it was decided that provision should be made in the articles

to prohibit cumulative voting. Discussion was then had as to the number of directors for the corporation.

Action by the Council.—On motion of Peers, seconded by Kinney and unanimously carried, the following resolution was adopted:

Resolved, That the number of directors of the proposed corporation be limited to seven.

**13. Report of the Council.**—The report of the Council as prepared by the chairman was read section by section and a few additions made.

**14. Illness of Doctor Moseley.**—Telegram from Doctor Moseley was read by the secretary. The Council expressed its regret of Doctor Moseley's inability to be present and authorized the president to write a letter of sympathy to Doctor Moseley.

**15. William KcKim Marriott.**—Telegram from Doctor William McKim Marriott, invited guest, was read. The Program Committee was authorized to secure another speaker for the general session at which Doctor Marriott was to speak. It was suggested that the committee attempt to secure as speaker, Doctor Sommer, Vice-President of the American Medical Association, who was present at the meeting.

**16. Members of Standing Committees.**—Discussion was had of the advisability of inviting members of standing committees to attend the meetings of the House of Delegates and enter into any discussion had on reports of such committees. It was pointed out that the meetings of the House of Delegates were open to all members of the Association and that if any reports of standing committees evoked discussions, the speaker would grant the members of the committees the courtesy of the floor.

**17. Adjournment.**—There being no further business, the meeting adjourned to meet in the same place at 2:30 p. m., Monday, April 28, 1930.

OLIVER D. HAMLIN, *Chairman.*  
EMMA W. POPE, *Secretary.*

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#### Minutes of the One Hundred and Ninetieth Meeting of the Council of the California Medical Association

*Approved at the One Hundred and Ninety-third Meeting of the Council of the California Medical Association, May 1, 1930.*

Held in Room 723, Hotel Del Monte, Del Monte, California, Monday, April 28, 1930, at 2:30 p. m.

**Present.**—Doctors Gibbons, Kinney, Pallette, Arnold, Duffield, DeLappe, Phillips, Hamlin, Harris, Rogers, Hunter, Cushman, Kress, Kelly, Coffey, Catton, Peers, Pope and General Counsel Peart and Vice-Speaker John H. Graves.

**Absent.**—Doctor Moseley.

**1. Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

**2. Prize Award.**—Doctor Emmet Rixford, member of the Committee on Clinical and Research Prizes, submitted the following report for the committee:

"On behalf of the Committee on Prize Essays I have the honor to make the following report:

"Five papers were submitted and were read by the three members of the committee each of whom voted independently of the others. Their vote coincided in awarding the Clinical Prize to the paper written under the pseudonym 'Philo,' and the Research Prize under the pseudonym 'Rose Trendelenburg.' It is only fair to state, however, the two papers, viz., that under the name 'Carpe Diem' and that under the name 'Ignotus,' were more than good seconds. We agree that they should receive honorable mention and suggest that they be presented to the meeting."

The secretary then opened the sealed envelopes containing the nom de plumes and stated that Emil

Bogen of Los Angeles wrote the paper "Pulmonary Hemorrhage" under the name of "Philo"; H. J. Hara of Los Angeles submitted the paper on "Comparative Merits of Posture in Tonsillectomy" under the name "Rose Trendelenburg"; T. L. Althausen, San Francisco, submitted the paper entitled "Functional Aspects of Regenerated Hepatic Tissue" under the name "Carpe Diem"; Mary Lawson Neff of Los Angeles wrote "Clinical Study of an Unusual Case of Tetanus" under the name of "Ignotus."

It was pointed out that it would be impossible to read the papers before the different sections as provided in the report, since all programs were filled.

Action by the Council.—On motion of Gibbons, seconded by Kress, and unanimously carried, the following resolution was adopted:

Resolved, That the report of the Committee on Clinical and Research Prizes be accepted and the recommendations contained therein be adopted, except that provision which states that papers shall be read before the respective sections; and that in addition to the \$150 prize, each winner be given a certificate of award.

3. **Council on Medical Economics of the A. M. A.**—The question of a Council on Medical Economics of the American Medical Association was further discussed, and on motion of Kress, seconded by Pallette, and unanimously carried, the following resolution was adopted:

Resolved, That the Council recommend that the House of Delegates of the California Medical Association be instructed to present a resolution asking the House of Delegates of the American Medical Association to consider the advisability of forming a Council on Medical Economics. Also that our delegates be instructed to call the attention of the House of Delegates of the American Medical Association to certain experiences had regarding the Porter Narcotic Bills.

4. **Report of the Council.**—Certain data which had been submitted for inclusion in the report of the Council was approved and ordered added to the report for presentation to the House of Delegates at the first meeting thereof.

5. **Minutes of the Council.**—Minutes of the 189th meeting of the Council were read.

Action by the Council.—On motion of Kelly, seconded by Harris, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the 189th meeting of the Council, as amended, be approved.

6. **Tax Exemption on Nonprofit Hospitals.**—Doctor Catton read the resolution passed at the 187th meeting of the Council wherein the California Medical Association endorsed the proposed legislation on tax exemption for nonprofit hospitals. Doctor Catton stated that he had been asked by those interested in the legislation if it would be possible to have the House of Delegates also endorse the resolution.

Action by the Council.—On motion of Catton, seconded by Duffield and unanimously carried, the following resolution was adopted:

Resolved, That a resolution be presented at the first meeting of the House of Delegates recommending endorsement of Amendment No. 6, which will exempt nonprofit hospitals from taxation in California.

Doctor Catton was instructed to prepare the resolution for presentation to the House of Delegates.

7. **Credentials Committee.**—Doctor Edward M. Pallette, Speaker of the House of Delegates, informed the Council that he had appointed as members of the Credentials Committee, Dr. George G. Reinle of Oakland, chairman; Dr. Percy T. Magan of Los Angeles, and Dr. John Homer Woolsey of San Francisco.

Doctor Kress stated that some type of form should be adopted in order to facilitate the work of the Reference Committee.

It was the sense of the Council that some such form blank should be used by the Reference Committee and that at the fall meeting of the Council the question should be again discussed.

8. **National Millers' Association.**—Dr. T. Henshaw Kelly stated that a representative of the National Millers' Association had requested that a resolution be passed by the Council of the California Medical Association similar to that passed by other State Associations deploring food fads.

On authorization of the Council Doctor Kelly formulated and presented the following resolution, which was seconded by Catton and unanimously carried:

Whereas, All sorts of food and nutritional fads, supported by misinformation and exaggerated claims and involving grossly unbalanced diets are being advocated by various persons and agencies; and

Whereas, Any diet, consisting of animal protein, fruits, vegetables, especially fresh and green vegetables, the better grades of bread, made from flour which contains the necessary vitamins and mineral salts, digestible fats such as butterfat, and other easily assimilable carbohydrates to complete the energy requirements of the individual, is a balanced diet; and

Whereas, The statements that meat, white bread, sweets, or other usual foods incorporated in a general diet are the causes of serious ailments are not based on scientific facts; and

Whereas, The results of dietary deficiencies have been grossly misstated by faddists; and

Whereas, Any special diet should be adopted only upon the prescription of a properly trained physician after complete study of the dietary necessities of the individual; therefore be it

Resolved, That the Council of the California Medical Association is in full accord with the statements made above and strongly disapproves on the basis of the danger to the public and individual health, of all food fads and special unbalanced diets.

9. **Medical Service.**—Doctor John H. Graves, chairman of the Medical Economics Committee stated that he had received some figures and data from other sources since the submission of his last report, particularly the Southern Pacific Company and some of the older hospital institutions, but as yet had not had time to incorporate them in a report for submission to the Council.

Doctor Walter B. Coffey then addressed the Council presenting a chart of figures which had been prepared by outstanding expert accountants, based on medical service to be furnished by the Santa Fe and Southern Pacific Railroads. Doctor Coffey stated that he would furnish Doctor Graves' Committee with such figures as he had obtained.

Doctor Duffield then brought up the question of having a meeting at which Doctors Coffey and Graves could discuss the medical service problem. It was pointed out that Dr. Rexwald Brown was scheduled to present a paper on the Business of Medicine before the joint section meeting of General Medicine and Pediatrics.

On motion of Peers, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That Dr. Rexwald Brown's paper on the Business of Medicine be presented as the fourth paper at the joint section meeting of General Medicine and Pediatrics and that Doctors Coffey and Graves discuss the paper at the close of its presentation.

10. **Retired Membership.**—Letter from the San Joaquin County Society requesting that retired membership be granted Dr. Mary C. Taylor was read.

Action by the Council.—On motion of Rogers, seconded by Peers, and unanimously carried, the following resolution was adopted:

Resolved, That Mary C. Taylor, former member of San Joaquin County Society, be granted retired membership in the California Medical Association.



Letter from the Tulare County Society requesting that Doctor Thomas O. McSwain be granted retired membership was read.

Action by the Council.—On motion of DeLappe, seconded by Duffield and unanimously carried, the following resolution was adopted:

Resolved, That Thomas O. McSwain, Visalia, Tulare County, be granted retired membership in the California Medical Association.

Letter from the San Bernardino County Society requesting that Drs. W. H. Stiles be granted retired membership was read.

On motion of Harris, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That W. H. Stiles, San Bernardino, San Bernardino County, be granted retired membership.

The advisability of adopting a form which would contain complete information on all doctors requesting retired membership was discussed and the following form was presented by Doctor Kress:

(Note.—Information here requested is to be secured by the secretary of the County Society making a retired membership recommendation.)

Name —

Address —

Born Where — When —

Graduate of — at place — in year —

In practice at the following places (approximate periods sufficient) —

Came to California to reside in year —

Licensed in California in year —

First joined a county medical society of the California Medical Association in year —

Has been a member of a county medical society of the California Medical Association for the last — years.

How long out of practice (in part) — ; (permanently) —

Remarks:

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PlaceDate

To the Council of the County Medical Association:

At a meeting of the (state whether executive board, or society as a whole —) it was voted to recommend for retired membership in the California Medical Association the name of — a member in good standing of this county.

Remarks:

Respectfully submitted,

The.....County Society.

By.....President.

.....Secretary.

Action by the Council.—On motion of Kress, seconded by Catton, and unanimously carried, the following resolution was adopted:

Resolved, That a form blank as submitted be used in applications for retired membership.

List of names of members of the San Francisco County Society to whom it was desired to grant retired membership was presented. Doctor Kelly, Secretary of the San Francisco County Society, stated that all of the members named had been fully investigated and that they met the requirements of length of membership and age.

On motion of Duffield, seconded by Pallette and unanimously carried, the following resolution was adopted:

Resolved, That Drs. David Cohn, Adolph J. Kahn, Arthur F. Sampson, Howard Somers, Emanuel Goodman, Henry C. McClenahan, James Franklin Smith, Edith W. Hammond, James J. Hogan, and Raymond Alexander, all members of the San Francisco County Society be granted retired membership in the California Medical Association.

12. **Constitutional Convention.**—The General Counsel stated that a committee had been appointed by

the Governor to investigate the desirability of calling a constitutional convention to prepare a model constitution for the state, and suggested that at hearings on matters of public health the Association be represented.

12. **Adjournment.**—There being no further business the meeting adjourned to meet in the same place at 9 a. m., Tuesday, April 29, 1930.

OLIVER D. HAMLIN, *Chairman.*

EMMA W. POPE, *Secretary.*

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Minutes of the One Hundred and Ninety-first Meeting of the Council of the California Medical Association

*Approved at the One Hundred and Ninety-third Meeting of the Council of the California Medical Association, May 1, 1930.*

Held in Room 723, Hotel Del Monte, Del Monte, California, April 29, 1930, at 9 a. m.

**Present.**—Doctors Gibbons, Kinney, Hamlin, Pallette, Duffield, Arnold, Peers, Rogers, Cushman, Kelly, Kress, DeLappe and Pope and General Counsel Peart.

**Absent.**—Doctors Phillips, Moseley, Catton, Coffey, Harris and Hunter.

1. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

2. **Adjournment.**—There being no business to come before the Council, the meeting adjourned to meet in the same place at 9 a. m., Wednesday, April 30, 1930.

OLIVER D. HAMLIN, *Chairman.*

EMMA W. POPE, *Secretary.*

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Minutes of the One Hundred and Ninety-second Meeting of the Council of the California Medical Association

*Approved at the One Hundred and Ninety-third Meeting of the Council of the California Medical Association, May 1, 1930.*

Held in Room 723, Hotel Del Monte, Del Monte, California, Wednesday, April 30, 1930, at 9 a. m.

**Present.**—Doctors Gibbons, Kinney, Hamlin, Pallette, Arnold, Duffield, DeLappe, Kress, Phillips, Harris, Rogers, Hunter, Cushman, Catton, Kelly, Peers, Pope and General Counsel Peart.

**Absent.**—Doctors Mosceley and Coffey.

1. **Call to Order.**—The meeting was called to order by the chairman, Oliver D. Hamlin.

2. **Woman's Auxiliary.**—The request of the Woman's Auxiliary that during the organization period financial aid be granted the Auxiliary by the California Medical Association was discussed. Doctor Kinney stated that the request had been made on account of expenses incurred in organization work. Doctor Kress pointed out that dues were assessed by the Auxiliary and that the organization should be self-supporting. It was decided that although the Association should aid the Auxiliary in its work no definite appropriation for the time being should be made.

3. **Place of the 1931 Annual Meeting.**—Discussion was had of the place of the next annual meeting. It was stated that invitations had been received from San Francisco and other cities.

On motion duly made and seconded, and unanimously carried, the following resolution was adopted.

Resolved, That the next annual meeting of the California Medical Association be held at San Francisco.

4. **Adjournment.**—There being no further business, the meeting adjourned to meet in the same place at 9 a. m., Thursday, May 1, 1930.

OLIVER D. HAMLIN, *Chairman.*

EMMA W. POPE, *Secretary.*

# STATE MEDICAL ASSOCIATIONS

## CALIFORNIA MEDICAL ASSOCIATION\*

LYELL C. KINNEY ..... President  
JUNIUS B. HARRIS ..... President-Elect  
EMMA W. POPE ..... Secretary

### OFFICIAL NOTICES

**Council Meeting.**—The next meeting of the Council will be held at Los Angeles, September 27, 1930.

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**Minutes of House of Delegates and Council.**—The attention of the members of the California Medical Association is especially called to the minutes of the House of Delegates and to the Minutes of the Council, to be found on pages 432 and 444, this issue.

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**Reports of Standing Committees.**—The reports of standing committees of the California Medical Association are published on page 425. These reports of the Committee on Medical Economics, and also of the Subcommittee on Clinics of the Standing Committee on Hospitals, Dispensaries and Clinics, are outstanding contributions to the study of the Cost of Medical Care, and will be printed in the July issue.

### COMPONENT COUNTY SOCIETIES

#### ALAMEDA COUNTY

The Baby Hospital acted as host to the Alameda County Medical Association at its regular meeting in April, providing not only the place of meeting, but an exceptional program on the subject of "Convulsions in Childhood." Dean Langley Porter of the University of California and H. C. Naffziger, also of the University, spoke on the subject from the standpoint of their respective specialties.

Dr. Joseph Erlanger, professor of physiology of the Washington University, gave a series of five lectures in Wheeler Hall, University of California, beginning April 21, on the subject of "Nerve Impulses."

GERTRUDE MOORE, *Secretary*.

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#### CONTRA COSTA COUNTY

The regular meeting of the Contra Costa County Medical Society was held at the Carquinez Hotel, Richmond, on May 13. This was a joint meeting with the Contra Costa County Dental Association.

The scientific program consisted in a dental and medical presentation of the subject of focal infection, with special reference to the oral cavity. Dr. Stewart V. Irwin of Oakland spoke on the relationship of teeth as foci of infection in health and disease. The speaker discussed the various factors which predispose to dental infection and the detrimental influence of infected teeth. Experimental studies on this subject were widely quoted. The reliability of radiographs in the diagnosis of dental infection was discussed. The speaker advised extraction of pulpless teeth in serious systemic disease when no other foci

of infection are found, even in the absence of positive x-ray findings.

The dental aspect of this subject was ably presented by Dr. A. C. Rulofson of San Francisco. The speaker concurred in Doctor Irwin's opinion, in regard to indication for extraction of infected teeth, but explained that differences of opinion on this question are usually on forms of treatment. Coöperation between physician and dentist was held to be the solution of the important question as to whether or not suspicious or infected teeth should be extracted or simply treated. Both papers brought out interesting discussion.

Dr. U. S. Abbott made a detailed report on the state convention, which he attended as delegate of the society.

The request of the Parent-Teacher Association for medical examiners at the annual medical examination of the preschool children was read. A buffet lunch followed the meeting. Doctor Bumgarner presided over a large attendance.

L. H. FRASER, *Secretary*.

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#### FRESNO COUNTY

A meeting of the Fresno County Medical Society was held May 6 at 8 p. m. in Judge Crichton's chambers.

Dr. Gavin J. Tefer, district health officer of Los Angeles, spoke on "Reportable Diseases, From the Standpoint of Physicians and Public Health Officers."

Meeting adjourned.

J. M. FRAWLEY, *Secretary*.

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#### NAPA COUNTY

The regular meeting of the Napa County Medical Society was held Wednesday, May 7, at 7 p. m., at the St. Helena Sanitarium. Dr. H. W. Vollmer, superintendent of the sanitarium, acted as host and provided a well-appointed banquet in the spacious new dining-room, which was tastefully decorated for the occasion. The dinner was enjoyed by sixty persons, including wives of members of the medical society, members of the St. Helena Sanitarium staff, Training School supervisors, and laboratory technicians. During the dinner a splendid program of instrumental music was furnished. Mrs. Jean Rogers of Petaluma, state president of the Woman's Auxiliary, spoke briefly concerning the Del Monte meeting. Mrs. Walter Blodgett of Calistoga, president of the Napa County Woman's Auxiliary, also spoke briefly about the organization. The ladies then adjourned for an informal discussion of the auxiliary work.

The meeting of the society was then opened by Dr. George I. Dawson, president, who called upon Dr. H. Coleman for his report as delegate to the recent state convention. Same was accepted by the society. The minutes of the previous meeting were read and approved. Bills for printing were allowed.

The speaker of the evening, Dr. Frank Topping of Sacramento, was then introduced and he read a paper on "Eclampsia," describing older ideas, theories, and treatments, as compared with present-day methods, in which it was shown that so-called radical treatment had been almost abandoned in favor of conservative methods, such as diet, sedation, elimination, reduction

\* For a complete list of general officers, of standing committees, of section officers, and of executive officers of the component county societies, see index reference on the front cover, under Miscellany.



of acidosis, colonic flushing, intravenous therapy, and cesarian section when indicated. His paper was then discussed by several of the members, and Doctor Topping then answered questions asked during the discussion.

The meeting then adjourned.

Ladies present: Mesdames C. H. Bulson, Walter Blodgett, H. R. Coleman, G. I. Dawson, C. A. Gregory, C. A. Johnson, C. E. Nelson, R. S. Northrop, Jean Rogers, and C. E. Sisson.

Members: M. M. Booth, W. L. Blodgett, I. E. Charlesworth, H. R. Coleman, G. I. Dawson, C. A. Gregory, C. A. Johnson, D. H. Murray, C. E. Nelson, R. S. Northrop, Orville Rockwell, John Robertson, C. E. Sisson, H. W. Vollmer, George J. Wood.

Visitors: Dr. C. E. Nixon, Imola; Dr. A. W. McLeish, Veterans' Home; Dr. H. S. Rogers, Petaluma; Dr. R. V. Harr and Dr. Hammerlick, Sonoma State Home; Dr. Ida Nelson and Dr. Ruth Miller, Saint Helena Sanitarium.

C. A. JOHNSON, *Secretary*.



#### ORANGE COUNTY

The regular monthly meeting of the Orange County Medical Society was held in the basement of the Tustin Presbyterian Church Tuesday, May 6, at 6:45 p. m. The Woman's Auxiliary and Nurses' Association were invited as guests, and a country dinner served by the ladies of the church, preceding the program, was most appetizing. Eighty members and guests were present at this meeting, and the speaker of the evening was Dr. Rea Proctor McGee of Hollywood, who gave a very interesting and complete discussion on "Facial Reconstruction." This was illustrated by lantern slides.

Following the speaker, a short business meeting of the association was held. The minutes of the last meeting were read and approved. By unanimous vote the secretary was ordered to pay all expenses incurred by the association and Woman's Auxiliary for the meeting of the Southern California Medical Society, and to send Mrs. F. E. Coulter, president of the auxiliary, a letter expressing the sincere thanks and appreciation of the society for the part the auxiliary took in making this meeting a success.

The report of the Committee on the Establishment of a Coöperative Collecting Agency was made, and by unanimous vote of the society it was decided that it would not be advisable at present to proceed with such plans.

Full reports by our delegates to the state meeting at Del Monte were made, Dr. Harry Zaiser and Dr. Dexter Ball each outlining in detail what took place at the various meetings. Dr. R. A. Cushman was reelected to the Council for a three-year period, and Mrs. Dexter Ball was elected as State Auxiliary secretary. Doctor Cushman also gave a very accurate and detailed report on the state meeting, explaining the work of the Committee on Medical Economics of which he is a member. He also reminded us of the advisability of having over one hundred members in this association in order to have three state delegates instead of two, which we now have with a membership of ninety-seven.

There being no more business the meeting adjourned.

HARRY G. HUFFMAN, *Secretary*.



#### PLACER COUNTY

The Placer County Medical Society held its April meeting in the banquet room of the Bret Harte Inn, in Grass Valley, April 19, the president, Dr. Max Dunievitz presiding.

There were present the following members and visitors:

Members: Drs. Dunicvitz, Durand, L. B. Barnes, Paul D. Barnes, William Miller, Peers, Thoren, Myers, Johnson, Rood, Russell, Fay, Carl Jones, Monica Stoy Briner, C. C. Briner, Tickell, and McArthur.

Visitors: Drs. Orrin S. Cook, F. P. Brendel, Gundrum, Hale, Charles Jones, Fanning, Primasing and Kanner of Sacramento; Dr. Miriam Pool Huff, Weimar; Dr. Ward, Auburn; Mr. Thoren, Weimar; Dr. Tom O'Connor, Murphy; Drs. Craig and Stone, Lakeport; Dr. Werner, Nevada City; and Drs. Loutzenheiser, Sooy, Best, Haas, Searls, Naffziger, Taylor, and Bost of San Francisco.

Dr. Miriam Pool Huff, now of Weimar, formerly of San Diego, having made application for transfer from the San Diego County Medical Society to the Placer County Medical Society, was unanimously elected to membership.

The meeting, the first in several years held in Grass Valley, was intended as a homecoming gathering for former residents of Nevada County now practicing outside the confines of the counties comprising the Placer County Medical Society district. An effort was made to notify all former Nevada County physicians so that they might have an opportunity to attend. The program, which was prepared under the direction of Dr. Howard Naffziger, formerly of Nevada City, now professor of surgery at the University of California Medical School, was featured by addresses by former Nevada County boys. Telegrams from Dr. W. W. Wymore and Dr. John Galloway of San Francisco, sending regrets at being unable to attend the reunion, were read by the secretary.

The following most excellent program was then presented:

Anomalies of the Lumbar Vertebrae (illustrated by lantern slides), Dr. Loutzenheiser; Pitfalls of Gastric Surgery, Dr. Sooy; Movements of the Intestines (illustrated by motion pictures), Dr. Best; Reduction of Congenital Dislocation of the Hip (illustrated by motion pictures), Dr. Haas; Comments on Goiter (illustrated by lantern slides), Dr. Searls; Newer Methods of Diagnosis in Intracranial Disease (illustrated by lantern slides), Dr. Naffziger.

Following the program, supper was served at the Bret Harte Inn.

This was one of the best attended and most satisfactory meetings in the history of the Placer County Medical Society.

ROBERT A. PEERS, *Secretary*.



#### SAN BERNARDINO COUNTY

The April meeting of the San Bernardino County Medical Society was held at the County Hospital in San Bernardino on Saturday, April 19, at 8:20 p. m.

In the absence of the president and both vice-presidents, the meeting was called to order by Dr. Gayle G. Moseley at 8:20 o'clock.

Owing to the lateness of the hour, the minutes of the previous meeting were omitted and, there being no business to be attended to, the program of the evening was started.

Simple Methods for the Diagnosis of Endocrine Disorders—Anthropometric and Roentgenographic. (Lantern slide demonstration.) By Dr. William Engelbach of St. Louis. Discussion opened by Dr. Charles A. Wylie of San Bernardino.

There were about fifty members and guests present.



The May meeting of the San Bernardino County Medical Society was held at Loma Linda on Tuesday, May 6. Dinner was served at 7 p. m. Between fifty and sixty members and guests were present.

Toward the end of the dinner a one-reel motion picture was shown by Mr. Hoff of the Petrolagar Laboratory, "Demonstration of Gall-Bladder Hormone."



Following this, our delegate, Dr. Charles Curtiss reported on his trip to the state medical convention at Del Monte.

The meeting was called to order by the president at 8 o'clock.

The minutes of the previous meeting were read and approved.

The program of the evening was then given, with some changes.

Dr. Henry Hoit first read his paper.

Dr. Thearle of Denver, Colorado, read a paper on "Thoracoplasty" at the request of Dr. S. J. Mattison, who was the original speaker.

Many interesting slides were shown by Dr. Thearle and Dr. Atkinson.

A vote of thanks was extended to the College of Medical Evangelists and to the three speakers.

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The meeting of the Board of Councilors was held at the Café Madrid in San Bernardino on Friday, May 2, at 12:10 p. m.

Members present were: Drs. Savage, Mock, Gage, Moor, Pritchard, and Eytinge.

The minutes of the previous meeting were read and approved.

The question of the June meeting was discussed and left open for the present.

The applications of Doctors Williams and Bacon were favorably passed upon.

A letter was read from Dr. William Engelbach extending his thanks for the courtesy extended to him at the last meeting.

It was moved by Dr. Philip Savage and seconded by Dr. D. C. Mock that a letter of appreciation be written to Dr. Granville MacGowan relative to his work in connection with corporations practicing medicine without a license.

The applications of Drs. Leslie E. Elliott, James J. Cecil, and Delbert B. Williams were voted upon and accepted.

The meeting adjourned at 1:30 o'clock.

E. J. EYTINGE, *Secretary*.

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#### SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday evening at eight o'clock, May 1, in the Medico-Dental Club, 242 North Sutter Street, Stockton.

The meeting was called to order by Vice-President G. H. Rohrbacher. The minutes of the previous stated meeting were read and approved.

The application of Dr. Thomas L. Sutton having been approved by the California Medical Society and the local society, the doctor was declared a member of the San Joaquin County Medical Society.

The scientific program was opened with an exhibition of moving pictures given by M. J. Cloyes of the Petrolagar Laboratories. He showed films on the "Movements of the Alimentary Tract in Experimental Animals," and "The Influences of Drugs on Gastro-Intestinal Motility."

The principal paper of the evening was given by Dr. Robertson Ward on "Acute Dilatation of the Stomach." Doctor Ward stated that whereas acute dilatation of the stomach is rare as a primary condition, it is quite common as a complication following laparotomy. It is due to an acute paralysis of the gastric walls and usually affects the upper intestinal tract as well. The atonic organ soon fills with fluid either secreted or regurgitated. The diagnosis is comparatively easy, based upon the distended abdomen with a mass in the left side. There is a constant effort to bring up gas with or without copious eructations and threatening hiccough. Even without such symptoms and before the gastric walls become completely

atonic, the presence of recurrent vomiting of fluid is a warning, and treatment at once will ward off more pronounced signs. Symptoms of toxic absorption appear rapidly if the condition is not relieved.

Method of treatment is by continuous gastric lavage with a Levin type duodenal tube passed through the nostril into the stomach and the flow maintained by continuous mild suction arranged as in the illustration to be found in the December issue of CALIFORNIA AND WESTERN MEDICINE on page 396. Usually the tube is lubricated with vaselin or glycerin and passed readily, but in nervous or excitable patients it may be necessary to anesthetize with five per cent cocaine solution. This method has been used successfully in paralytic ileus, intestinal obstruction, acute gastric dilatation, and even in persistent postoperative vomiting. The advantages are as follows: (1) Relief from conditions caused by gas and regurgitated fluids is obtained. (2) There is either interrupted or continuous lavage of the stomach and, in some cases, of the duodenum. (3) Nausea and toxemia are relieved. (4) The patient may drink water freely, relieving that most distressing symptom, thirst. (5) Transgastric feeding and medication are made possible. (6) The patient is so much more comfortable that he often begs for the return of the duodenal tube after having once experienced the relief afforded by its use. If the treatment is prolonged it is necessary to combat alkalosis by massive subcutaneous injections of normal saline solution. The same solution should be used for the gastric lavage. If it is impossible to retain food, nourishment is sustained by intravenous glucose.

Doctor Ward summarized by saying: "Acute gastric dilatation, formerly considered a serious and frequently fatal complication, should no longer be a possible cause of death. Suspicion of its presence should lead to a speedy test by transnasal insertion of a duodenal tube. Treatment by the apparatus for continuous gastric drainage herein described is simple and rapidly efficacious."

The paper was freely discussed by Doctors Dozier, Priestley, Sanderson, Vischi, and English.

The meeting was attended by Mr. M. J. Cloyes, Doctors Robertson Ward of San Francisco, F. B. Reardon and O. S. Cook of Sacramento, E. F. Reamer and Smith of Modesto, and Dozier, Blinn, Broadus, English, Blackmun, McGurk, Hull, Priestley, Vischi, Kaplan, Holliger, Sanderson, Dewey Powell, and Rohrbacher of Stockton.

There being no further business the meeting was adjourned and refreshments served.

C. A. BROADDUS, *Secretary*.

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#### SAN MATEO COUNTY

The March meeting of the San Mateo County Medical Society was attended by about eighteen members of the society, following dinner at Chartier's Café. The meeting was presided over by Dr. Harper Peddicord of Redwood City, president of the society.

The speaker of the evening was Dr. Otis Allen Sharpe of San Francisco, who gave an interesting talk on quacks and near-quacks in the modern art of healing. He pointed out that by misleading and incorrect statements some of the professions allied to the medical profession are infringing on the fields of both the general practitioner and the specialist; that this advertising works to the detriment of both the patient and the physician; and that it is the duty of the physicians to right this condition.

It was decided to investigate this matter and take whatever steps seem advisable at a later date.

It was also voted to approve the standing orders of the Metropolitan visiting nurses for use in their routine visits to clients who are ill.

ERMA B. MACOMBER, *Social Secretary*.



## SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on Monday evening, May 12, at the University Club, Dr. Hugh Freidell presiding.

This was a dinner meeting, held in honor of Dr. Leo Buerger of Los Angeles.

The minutes of the previous meeting were read and approved.

The applications of Drs. Leonard Brunie, Yolande Brunie, and Charles Warwick were read and, upon ballot, these applicants were unanimously elected to membership.

An invitation from the California State Dietetic Association to the members of the society to attend their convention May 13 to 16 was read.

Doctor Freidell then spoke of the death of Dr. Alex C. Soper, and upon motion, duly seconded and carried, a committee consisting of Doctors Means, Ullmann, and Eaton was appointed to draw up proper resolutions.

Doctor Evans then spoke of the necessity for the Bissell Library to be further equipped with magazines and books, and it was moved, seconded and carried, that the president appoint a committee to investigate means of financing this problem. A committee consisting of Doctors Evans (chairman), Markthaler, and Bakewell was appointed.

President Freidell then called upon Doctor Thorner to introduce the speaker of the evening, and he paid Doctor Buerger a glowing tribute for his outstanding contributions to medical science.

The membership then adjourned to the lounging room of the University Club, where they were entertained by a most interesting talk, illustrated with lantern slides, on "Some of the Clinical and Pathological Aspects of Renal and Ureteral Lithiasis."

At the conclusion of Doctor Buerger's talk, discussions were entered into by Doctors Pierce, Wills, and Engelbach.

There being no further business the meeting adjourned.

WILLIAM H. EATON, *Secretary*.

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## TULARE COUNTY

A grand time was enjoyed by a joint meeting of the Medical and Bar associations of Tulare County at Motley's Café in Visalia on March 23. The invitations to the members of the Bar Association were sent out in the form and legal verbiage of subpoenas, with very few alterations.

The guest of the evening was Dr. C. D. Leake, professor of pharmacology at the University of California, who addressed the members on "Coöperation Between Medicine and Law in Poison Cases." The address was interspersed with a few anecdotes, and was highly appreciated by those present.

Dinner was served at 7 p. m., followed by the address, which continued to 9:45, the time for the return train of the speaker.

The following members of the medical and law associations were present: Dr. J. H. Banks, Dr. D. McFadzean, J. T. Fuller, Dr. W. W. Tourtillot, F. Lamberson, Judge of the Superior Court; Dr. A. W. Preston, Dr. E. R. Zumwalt, Dr. T. Mooney, Dr. E. C. Bond, Dr. Annie L. Bond, Dr. J. T. Melvin, Dr. F. R. DeLappe, Dr. H. A. Campbell, Dr. C. D. Leake, D. F. Maddox, Dr. S. S. Ginsburg, Dr. D. Fowler, Dr. A. Miller, J. Field, Ph. D.; W. G. Machetanz, J. P. King, J. A. Shishmanian, H. S. Mills-paugh, Walter Haight, E. L. Lindsay, W. R. Bailey, H. B. McClure, E. C. Farnsworth, C. L. Bradley, M. E. Power, J. T. Crowe, Dr. G. B. Furness, N. F. Bradley, J. R. McBride, Dr. B. H. Gilbert, Dr. F. R. Guido, Dr. K. F. Weiss, D. E. Perkins, Dr. I. M. Lipson, Dr. E. Brigham, Dr. A. N. Loper, L. A. Cleary, S. Halbert, and J. M. Burke.

## CHANGES IN MEMBERSHIP

## New Members

*Alameda County*—Marvin E. Kirk, Charles J. Lunsford, Oscar P. Stowe, Theodore W. Weller.

*Contra Costa County*—Earl B. Fitzpatrick.

*Los Angeles County*—

Forrest N. Anderson	George E. Judd
William Gillspie Attwood	George B. Kryder
Irby B. Ballenger	John P. Lordan
Clifford Loomis Bartlett	Clyde Ferdinand Loy
George D. Brown	A. T. Martin
Leo Buerger	George Henry Martin
Donald Austin Charnock	Will L. Miles
G. E. Christensen	Harold A. Mourer
John C. Cottrell	Thomas Elwood Noble
William A. Dashiell	Sverre Oftedal
J. Dwight Davis	Walter R. Pendleton
William V. Gale	Joseph D. Peluso
Fred Gassmann	William Frederick Reasner
Donald W. Cady	Marie Margaret Schiller
Walter Donald Gilkey	Camilo Servin
Daniel G. Golding	Earl Newell Van Ornum
William H. Grishaw	Cecil B. Van Sciver
Harold H. Hanlon	William F. Wagner
Howard R. Harner	F. M. Wood
John P. Isaac	Frank W. Young

*Placer County*—Louis Ernest Jones.

*San Diego County*—Harold S. Sumerlin.

*San Mateo County*—Paul G. Capps.

*Santa Clara County*—Frank B. Hoover, Charles A. Wayland.

## Transferred Members

Eugene S. Maxson, from Alameda to Los Angeles County.

Mariam Pool Huff, from San Diego to Placer County.

Charles R. Caskey, from Humboldt to Los Angeles County.

Clayton R. Lane, from Orange to Los Angeles County.

Rollan W. Kraft, from Alameda to Los Angeles County.

Harry J. Wiley, from Tulare to Los Angeles County.

Amos D. Ellsworth, from Fresno County to Texas Medical Association.

Jens Molgaard, from San Francisco to San Mateo.

## Deaths

**Clark, John Baptist.** Died May 3, 1930, age 34 years. Graduate of the University of California Medical School, San Francisco, 1927. Licensed in California, 1927. Doctor Clark was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

**Dunham, Ora Berton.** Died April 21, 1930, age 51 years. Graduate of University of Illinois College of Medicine, Chicago, 1900. Licensed in California, 1904. Doctor Dunham was a member of the Imperial County Medical Society, the California Medical Association, and was a Fellow of the American Medical Association.

**Soboslay, Julius.** Died at Madera, April 21, 1930, age 70 years. Graduate of the University of California Medical School, San Francisco, 1886. Licensed in California, 1886. Doctor Soboslay was a retired member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

**Soper, Alexander Coburn.** Died May 10, 1930, age 58 years. Graduate of Rush Medical College, Illinois, 1901. Licensed in California, 1919. Doctor Soper was an honorary member of the Santa Barbara County Medical Society, the California Medical Association, and the American Medical Association.



## THE WOMAN'S AUXILIARY OF THE CALIFORNIA MEDICAL ASSOCIATION\*

### PRESIDENT'S MESSAGE

To the Woman's Auxiliary of the California Medical Association:

We have just had our second state meeting. What was accomplished at the Del Monte meeting splendidly compliments the first one at Coronado last year.

The gratifying response to the efforts made by the officers of the various county units already organized and the splendid attendance at the state meetings, considering the short time the Auxiliary has been in existence, augur well for the future. But more than this was the deep interest shown by the women who were fortunate enough to attend, in order to lend their influence and experience for the building of a strong and permanent organization. Mrs. H. S. Rogers, president, outlined the foundations already laid, especially recommending concentration upon a wide distribution of "Better Health" literature. During Mrs. Rogers' presidency eight splendid county auxiliaries were organized.

Our most essential primary effort from now on must be the organization of the counties that are at present without auxiliaries. And we shall not be satisfied so long as one county remains unorganized. From the enthusiasm which developed following the Coronado meeting, and which was so actively manifest at Del Monte, we have every reason to anticipate a tremendous increase in our membership. Enough has already been accomplished to show in a concrete way the need for the auxiliary, for the assistance of the women who are interested, because they are wives and relatives of physicians, in the progress of medical science and in the practical help they can give to the physicians of the state in their endeavors to bring the body politic to a real appreciation of the possibilities of such an organization.

If some of the far-sighted women in each unorganized county will take it upon themselves to see that the president of their county medical association will appoint those who are willing to work toward this end, your state officers will be greatly assisted and happy to suggest, if needed, the methods found most successful not only in this state but in others.

Your new officers are thoroughly appreciative of your confidence in electing them to the state offices, and are not unmindful of their responsibilities. Nevertheless, it is with high and enthusiastic hopes that they anticipate a hearty coöperation from everyone in putting California over this year 100 per cent.

MRS. JAMES F. PERCY, *President.*



### Minutes of the Second Annual Session of the Woman's Auxiliary of the California Medical Association

The first meeting of the second annual session of the Woman's Auxiliary of the California Medical Association was held in the lounge of Hotel Del Monte, Monterey County, California, Tuesday morning, April 29, 1930, with the president, Mrs. Henry S. Rogers, in the chair, and the secretary-treasurer, Mrs. R. A. Cushman, recording the proceedings.

The chairman called the meeting to order and introduced Mrs. Charles R. Lowell of Monterey County, who gave the address of welcome on behalf of Monterey County to auxiliary members and visiting ladies.

The minutes of the session held in Coronado on May 7 and 8, 1929, were read. On motion of Mrs. Scott D. Gleeton of Los Angeles County, seconded by Mrs. George G. Hunter of Los Angeles County,

and unanimously carried, the minutes were approved as read.

The chairman announced there would be a report from each organized county and asked the secretary to call the roll by counties.

The secretary requested each county to give the names of officers, of delegates or alternates elected, and number of members.

Mrs. H. V. Brown of Los Angeles County inquired if this could not be done outside of the meeting.

The secretary stated this was not possible, as she found the representation at the meeting did not check up with her credential report.

The chairman announced that the meeting would proceed with the hearing of county reports. Upon request of the secretary, Mrs. George G. Hunter of Los Angeles County recorded the oral report, which record is filed herewith and made a part of these minutes.

The chairman urged that each county send in dues to the state secretary at the earliest possible moment, in compliance with the request of Mrs. George H. Hoxie, president of the national Woman's Auxiliary, and stated that the national dues are 25 cents per member, the state dues the past year 75 cents per member.

Upon the chairman's request the secretary presented a budget made at the request of the chairman and for the purpose of assisting in ascertaining the amount of dues necessary to maintain the state organization during the ensuing year. The secretary declared such budget to be purely tentative, as it could not be based upon the treasury report of the past year, the president, Mrs. Rogers, having handed in no expense account, and no stationery having been printed. The budget as submitted is appended to these minutes, marked "Appendix A."

The chairman called for the treasurer's report, which was given as appended to these minutes, marked "Appendix B."

The matter of state dues was then presented. Upon motion of Mrs. James F. Percy of Los Angeles County, seconded by Mrs. Dexter R. Ball of Orange County, and unanimously carried, state dues for the ensuing year were tentatively fixed at fifty cents, such sum to cover national dues also of twenty-five cents per member.

The chairman submitted an oral report covering the work accomplished during the past year, explaining the aims of the organization, and touching upon the work necessary during the coming year. She stated election of officers for the coming year would be held Wednesday night.

Moved by Mrs. William Duffield of Los Angeles County, seconded by Mrs. H. B. Tebbetts of Los Angeles County that the meeting adjourn.

The secretary called to the attention of the members the fact that only one business meeting had been announced for the session, that of Tuesday morning, that the Wednesday morning meeting as announced was to consist of a program of addresses. She suggested that delegates might be leaving who had come prepared to vote for officers at this meeting.

The chairman requested delegates who were leaving after the meeting to signify by uplifted hands. A number of hands being raised, the chairman asked Mrs. Duffield if she would withdraw her motion. Some debate took place as to the proper time for the election of officers, but no action taken, a motion being before the house and the speakers not being recognized by the chair. The motion to adjourn was withdrawn by Mrs. Duffield.

Moved by Mrs. Thomas Stoddard, charter member of San Francisco County, seconded by Mrs. Charles S. Stevens of Santa Barbara County, that the meeting proceed and officers be elected for the ensuing year.

Mrs. James F. Percy offered an amendment to add the words "that the meeting proceed on Wednesday afternoon directly after luncheon." The amendment was not entertained by the chair. The question of election of officers was further discussed, the question put, and the motion unanimously carried.

\* As county auxiliaries to the Woman's Auxiliary of the California Medical Association are formed, the names of officers should be forwarded to the state secretary-treasurer, Mrs. Dexter R. Ball, 2419 Bonnie Brae, Santa Ana, and to the California Medical Association office, Room 2004, 450 Sutter Street, San Francisco. Brief reports of county auxiliary meetings will be welcomed for publication in this column.



Moved by Mrs. H. V. Brown of Los Angeles County, seconded by Mrs. Dexter R. Ball of Orange County, and unanimously carried, that a nominating committee be formed.

The chairman appointed Mrs. Charles S. Stevens of Santa Barbara County and Mrs. George G. Reinle of Alameda County to serve on the nominating committee and called for nominations of two more members from the floor. Mrs. George G. Hunter of Los Angeles County and Mrs. Arthur A. Archart of Monterey County were regularly nominated, and unanimously elected.

The question of the time when new officers should be installed was informally discussed, but no action taken.

The nominating committee having retired, upon return was called upon to report. Mrs. Stevens, chairman of the Nominating Committee, in submitting her report explained the action of the committee as being influenced by the practice in operation with the California Medical Association in choosing their state officers alternately from different sections of the state. The chairman reported as follows:

President—Mrs. James F. Percy of Los Angeles County.

First vice-president—Mrs. J. M. McCullough of Contra Costa County.

Second vice-president—Mrs. Thomas A. Stoddard, charter member, of San Francisco County.

Secretary-treasurer—Mrs. Dexter R. Ball of Orange County.

The chairman inquired if there were any nominations from the floor. There being none, upon motion of Mrs. John H. Shephard, charter member and ex-officio member, of Santa Clara County, seconded by Mrs. H. V. Brown of Los Angeles County, and unanimously carried, the report of the Nominating Committee was accepted. Upon motion of Mrs. Brown, seconded by Mrs. Irving Bancroft of Los Angeles County, and unanimously carried, the vote was cast in favor of the nominees and they were declared elected.

Upon suggestion of Mrs. Stevens, chairman of the Nominating Committee, and by unanimous consent, a rising vote of thanks was given Mrs. Rogers, state president, for the successful manner in which she had launched the organization and for having so generously contributed her services in the pioneer work necessary to achieve success. By informal consent the secretary was also commended.

The secretary was instructed to write Doctor Pope, secretary of the Medical Association, and Doctor Kress, Auxiliary adviser, letters of appreciation for their valuable assistance during the past year; also to send flowers to Mrs. Lyell C. Kinney, wife of the president of the California Medical Association, and to congratulate her in the name of the auxiliary on the birth of a son.

The meeting adjourned to Wednesday, April 30, 1930, at 10 a. m.

CLARA R. CUSHMAN, *Secretary*.

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The second meeting of the second annual session of the Woman's Auxiliary of the California Medical Association was held on the mezzanine floor of Hotel Del Monte, Wednesday morning, April 30, 1930, with the retiring president, Mrs. Henry S. Rogers, calling the meeting to order at 10 o'clock.

The chairman introduced Dr. Morton R. Gibbons, president of the California Medical Association, who made a short and interesting address on the aims and purposes the California Medical Association had in view in launching a woman's auxiliary. He particularly emphasized the need existing for a body of women educated in health matters to promote the public health through organized effort, and he suggested and advised the auxiliary to make a study of the matter of health insurance, a subject which is now of great moment and concern to the California Medical Association.

Dr. Lyell C. Kinney, president-elect of the California Medical Association, was then introduced. Doctor Kinney enlarged upon two lines of useful work to which the auxiliary might devote itself with benefit for the coming year. First, perfecting the organization by enlarging and consolidating the units, *i. e.*, increasing membership and coöperating in aims and purposes; second, educating the public in health matters.

The third speaker, Dr. William Duffield, father, as he stated, of the Woman's Auxiliary movement in California, went into detail, after being introduced, as to what, in his opinion, are the chief objects of the American Medical Association and California Medical Association in encouraging the wives and near relatives of their members to organize, and as to what the duties of such organizations should be. In broad terms his most important message was the urgent need of an organization designed to combat ignorance and superstition in matters of biology, physiology, and medical treatment. He stated that scientific education in medical matters is the biggest business of the auxiliary. He cited many illustrations to prove that such ignorance and superstition along medical lines exists among so-called highly educated people, even educators in our highest seats of learning being ignorant of the functions and constitution of the human body; and he advised auxiliary units to turn their efforts toward changing this condition for the better. With such end in view he gave concrete suggestions for the county units to follow, such as:

1. Put the magazines *Better Health* and *Hygeia* into local circulation.

2. Read regularly all material in *CALIFORNIA AND WESTERN MEDICINE* and the *American Medical Journal*, pertaining to auxiliary work and of interest along the line of public health education; also see that your husband reads them.

3. Make a study of the different cults, becoming informed as to their methods of propaganda, not taking concerted action against such cults which would, the speaker stated, be inadvisable, but learning what they are doing in order better to direct the auxiliary's work.

4. Making a study of material sent out by the American Medical Association, a bibliography of which was furnished by the speaker to those present, and which may be secured by application to the American Medical Association.

5. A study of the antivivisection movement, about which there is so much mental confusion and so much false propaganda.

Doctor Duffield gave an interesting account of the methods of a certain cult in forcing through their programs through economic pressure, with many concrete cases cited. He dwelt upon the harm religious cults bring about through appeal to superstition, to the injury of health, and gave a number of case histories of so-called cures by religious healers, which he had personally investigated and found to be no cures at all.

He suggested that the beginning of this work in public health education might well be in the public schools, where health matters are usually taught improperly, falsely, or not at all, and advised the auxiliary, through the Parent-Teacher Associations and through advocating certain legislative measures as they are introduced, to promote the teaching of biology, physiology, and hygiene in the public schools.

Also, Doctor Duffield advised the county units to go into politics to see that they supported as a whole the proper candidates, those having an understanding of and an intelligent outlook on scientific health matters.

He advised the auxiliary the members would be performing a fine bit of work if they should compile a history of medicine, one which is not technical but for the benefit of the average reader.

Finally he outlined a course of medical study along the line of the old Chatauqua courses, and he fur-



nished the following list of books, which he recommended for study by the auxiliaries and for private reading.

Vallery-Radot—"Pasteur."  
 Logan Clendening—"The Human Body."  
 Carl Menninger—"The Human Mind."  
 Bobbs-Merrill Pub. House—"Medical Leaders."  
 Morris Fishbein—"Medical Follies."  
 Walsh Walsh—"Cures."  
 McLaren—"Postmortem."  
 Howard W. Haggard—"Devils, Drugs, and Doctors."

Cushing—"Life of Osler."

At the conclusion of Doctor Duffield's talk, the questions and discussion became so general that the adjournment was taken informally, and no opportunity was given to express appreciation to the speakers, although this was manifested by the enthusiasm and close attention the audience paid to each talk.

CLARA R. CUSHMAN, *Secretary*.

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#### APPENDIX "A"

##### Minutes Second Annual Session, First Meeting TENTATIVE BUDGET

Based Upon a Presumed Membership of One Thousand.	
Letterheads and envelopes.....	\$20.00
Second sheets.....	3.00
Office supplies (carbon, clips, folders, etc.).....	3.50
Stamps, five hundred.....	10.00
Telegrams and telephone calls.....	15.00
Parcel post circulars and material, forty counties eight months at 5 cents.....	16.00
Stenographic services ten months at \$10.....	100.00
Entertainment and expense state meeting.....	50.00

Total tentative amount.....\$217.50  
 Office file—organizing expense may be necessary, but not listed.

#### APPENDIX "B"

##### Minutes Second Annual Session, First Meeting TREASURER'S REPORT

From May 9, 1929, to April 28, 1930

Treasurer is charged as follows:	
Forty-six charter membership dues, \$1 each.....	\$46.00
National dues as follows:	
San Bernardino County, eleven members at 25 cents each.....	\$ 2.75
Kern County, twelve members at 25 cents each.....	3.00
Napa County, twelve members at 25 cents each.....	3.00
Sonoma County, twenty-one members at 25 cents each.....	5.25
Contra Costa County, sixteen members at 25 cents each.....	4.00
Total national dues.....	18.00
Total charges.....	\$64.00
Treasurer is credited as follows:	
Stamps and stationery.....	\$ 9.35
Minute book.....	1.60
Office supplies.....	.75
Total credits.....	11.70
Which, when deducted from total charges, leaves a balance of.....	\$52.30
Consisting of:	
Cash in First National Bank of Santa Ana.....	\$34.30
Checks for national dues (uncashed).....	18.00
Total cash on hand.....	\$52.30

CLARA R. CUSHMAN,  
*Secretary-Treasurer.*

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#### LOS ANGELES COUNTY

The regular meeting of the Woman's Auxiliary was held Thursday, April 17, at 2:30 p. m. in the Assembly Hall of the Friday Morning Club building, Los Angeles, with Mrs. James F. Percy, president, presiding. There was a large attendance.

Mrs. George G. Hunter was appointed acting secretary for the secretary, Mrs. Martin G. Carter, who was absent on account of illness. After the reading of the minutes, Mrs. Percy presented the speaker of the afternoon, Dr. George H. Kress.

Doctor Kress' theme was the object of the organization as conceived by the California State Medical Association—the basic purpose of the organization.

And he presented his subject clearly and concisely in a manner that was not only entertaining, but most instructive.

He urged the members of the auxiliary to focus their attention upon the fundamental principles on which scientific medicine is founded. Only in this way would the auxiliary be able to exert its full power for the benefit of the medical profession and the community.

Women's clubs, Doctor Kress pointed out, are happily in a position to demonstrate to the intelligent laymen the difference between faddism and scientific medicine. As an example of what scientific medicine has already accomplished for community welfare, Doctor Kress cited the "pure milk" situation.

Keep out of politics, was the doctor's admonition. Unless one has a special flare for politics, it is likely to prove disastrous rather than helpful.

Doctor Kress paid a high tribute to the work of Dr. Mona Bettin, whose work in applied bacteriology for the welfare of this community is beyond praise.

At the close of Doctor Kress' address, Mrs. Elliot Alden proposed a rising vote of thanks by the Woman's Auxiliary members, which was given with enthusiasm and appreciation.

A delightful musical program was given by Mrs. William A. Clark, violinist, with Mrs. E. D. Kremers, accompanist, two gifted members from Pasadena, who have won fame on the concert stage.

A delicious tea was served, with the Long Beach members as hostesses, Mrs. B. von Wedelstaedt, chairman.

\* \* \*

The brilliant ball and frolic given on Saturday evening, May 10, by the Los Angeles County Medical Association, assisted by the Woman's Auxiliary, at the Grand Central Airport on San Fernando Road, was enjoyed by over three hundred participants. The ball and supper rooms were elaborately decorated in exquisite taste. And the sumptuous supper was something to be remembered by the most discriminating epicure. An exceptionally fine dance orchestra played throughout the evening. And a big thrill was contributed by the huge tri-motored plane which was provided to take the guests for fifteen-minute rides into the perfect moonlit night. Not the least interesting incident of this unusual evening was the trip into the hangars with a well-informed guide who explained the intricate and intriguing details of the imposing array of planes.

The outstanding success of this occasion is a tribute to the enthusiastic work of Mrs. James Fulton Percy, president of the Los Angeles County Auxiliary and recently elected president of the state auxiliary; Mrs. Philip Schuyler Doane, general chairman; Mrs. George G. Hunter, and Mrs. Martin G. Carter.

Present with parties of guests were noticed: Doctors and Mesdames Robert V. Day, Philip Schuyler Doane, James Fulton Percy, George G. Hunter, Martin G. Carter, William Duffield, John V. Barrow, Elliot Alden, H. V. Brown, E. M. Lazard, LeRoy Sherry, Walter P. Bliss, B. von Wedelstaedt, Edward Huntington Williams, Theodore Lyster, Isaac H. Jones, H. G. Marxmiller, Fitch Mattison, and Edward Palette.

\* \* \*

The next meeting of the Woman's Auxiliary will be on Thursday, June 19, at 2:30 p. m. in the Assembly Hall of the Friday Morning Club building, Los Angeles. This will be the last regular meeting until autumn, although in the interim the Executive Committee are planning to call round-table gatherings to discuss any issues that may arise.

Mrs. Percy announces that the Western Surgical Supply Company are sending, complimentary to all members of the auxiliary, the monthly magazine, *Medical Economics*. This is a business magazine and contains innumerable suggestions and ideas which the members of the auxiliary will find practical and useful.

CORA YOUNG WILLIAMS,  
*Publicity Chairman.*



## NEVADA STATE MEDICAL ASSOCIATION

W. A. SHAW.....	President
R. P. ROANTREE, Elko.....	President-Elect
H. W. SAWYER, Fallon.....	First Vice-President
E. E. HAMER, Carson City.....	Second Vice-President
HORACE J. BROWN.....	Secretary-Treasurer
R. P. ROANTREE, D. A. TURNER, S. K. MORRISON.....	Trustees

### COMPONENT COUNTY SOCIETIES

#### WASHOE COUNTY

The Washoe County Medical Society met in the Washoe County Library building, Reno, on May 13, at 8 p. m.

In the absence of Doctor Hamer, president, the vice-president, Doctor Creveling, occupied the chair.

No clinical cases to report. The president introduced Doctor Samuels of Reno, who responded with a paper on the "Treatment of Neisserian Infections in the Male." While Doctor Samuels gave enough citations from standard authorities, he went more fully into the matter of his own personal experience in handling and treating this type of case.

Especially so in the social management of patients. Doctor Samuels gave a number of practical hints which dwelt with this troublesome side of the case.

The usual routine for medical treatment can be found in standard text works, modified by actual experience of the practitioner. In a disease for whose cure most of the traveling pharmaceutical salesmen have the last word for absolute cures and 100 per cent records, the man of experience listens to these confidential tips as he would listen were he playing the races, and takes them just for what they are worth. Given time enough and an obedient patient, this class of patients will respond to a well-directed rational therapy.

Next followed a paper by one of Reno's attorneys on the subject of "Insanity and the Law." This paper formerly appeared in the April 1930 number of *American Mercury*. The paper was scholarly. Many of the physicians of Reno who had already read the paper were there to hear it from the author himself. The paper called out a number of commendations, and it was the opinion of all present that this paper should be in the library of every physician.

There being no further business the meeting adjourned.

THOMAS W. BATH, *Secretary*.

## UTAH STATE MEDICAL ASSOCIATION

H. P. KIRTLEY, Salt Lake City.....	President
WILLIAM L. RICH, Salt Lake City.....	President-Elect
M. M. CRITCHLOW, Salt Lake City.....	Secretary
J. U. GIESY, 701 Medical Arts Building, Salt Lake City.....	Associate Editor for Utah

### COMPONENT COUNTY SOCIETIES

#### SALT LAKE COUNTY

A joint meeting of the Salt Lake County Medical Society and the Utah Ophthalmological Society was held at the Newhouse Hotel on Monday, April 14.

The meeting was called to order at 8:05 p. m. by President M. M. Nielson. Forty-seven members and three visitors were present.

The minutes of the previous meeting were read and accepted without correction.

The scientific program was as follows: "Strabismus" by D. W. Henderson. This paper was discussed by E. M. Neher, W. D. Donohue, F. Stauffer, L. W. Snow, and H. Van Cott. "The Accessory Nasal Sinuses" (lantern slides) by F. M. McHugh. This paper was discussed by F. Stauffer.

A letter from the American Medical Association was read urging that this society use its efforts to amend the Porter Federal Narcotic Service Reorganization Bill, as suggested in the April 12 issue of *The Journal of the American Medical Association*.

\* \* \*

The following report of the Necrology Committee, J. U. Giesy, chairman, was read:

#### IN MEMORIAM—GEORGE F. ROBERTS

Whereas, An inscrutable Providence in the pursuance of its, to us unknown, purposes, has seen fit to remove from his mundane field of activities our admired and respected confrère, Dr. George F. Roberts; and

Whereas, We, who have known and labored with him in a common pursuit for years, feel deeply the loss to us and to his friends and loved ones as well as to the community at large; therefore be it

Resolved, By the members of the Salt Lake County Medical Society that we take this formal action to express our regret; that this resolution be inscribed on the minutes of the society as a permanent record and tribute to our departed member, and that a copy be forwarded to the family of the deceased as a mark of that personal tribute which we pay him in our hearts, and of the appreciation of his worth which we carry forward with us in our thoughts.

W. F. Beer moved that the report be accepted and filed. Seconded and carried.

\* \* \*

The application of L. H. O. Stobbe was read and turned over to the board of censors.

A. C. Callister read a communication from the chief of police relative to the present Caduceus tax. This was heatedly discussed by M. M. Nielson and W. F. Beer. President M. M. Nielson appointed a special committee to consider this communication.

J. P. Kerby gave a lengthy report of the Fee Schedule Committee. This was ably discussed by most of the members present, and following several motions which were later rescinded, J. Z. Brown's motion to the effect that action on this report be deferred until the meeting of June 9 was seconded and carried. J. P. Kerby moved that the following amendment to the by-laws of the Salt Lake County Society be voted upon at the business meeting in June. The fee bill adopted at this meeting is intended to represent the average fee under ordinary circumstances (both columns referred to minimum fees), the difference between them indicating common differences, depending upon the responsibility and judgment involved in treating different cases, and the ability of patients to pay. This fee schedule does not attempt to indicate proper compensation in those cases requiring special skill, extraordinary responsibility, or unusual character of service. This society recognizes the right of every member to charge what he believes to be a fair and adequate fee for services rendered, or to give the whole or any part of his services in charity. But it will be considered his duty to abide by the fee schedule herein mentioned whenever the circumstances of the patient do not clearly forbid. Any violation of the provisions of said fee schedule solely for the purpose of securing a patient shall be considered *ipso facto* cause for loss of membership. The usual procedure of this society in the matter of filing a complaint against a member shall be followed; and a written

notice of this proposed amendment be furnished each member not less than ten days before the regular business meeting in June. Motion seconded and carried.

Meeting adjourned at 10:30 o'clock.

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The regular meeting of the Salt Lake County Medical Society was held at the Holy Cross Hospital on Monday, April 28.

The meeting was called to order by President M. M. Nielson at 8:15 p. m. Forty members and two visitors were present.

The minutes of the previous meeting were read and accepted after a slight correction.

The application of M. F. Poulson was read and turned over to the board of censors.

L. H. O. Stobbe was unanimously elected a member of the society.

The clinical program was as follows: A Burn Case, S. H. Besley. The Use of Mercurials in Cardiac De-compensation, Claude Shields and R. Friel. Surgical Shock, Douglas Hansen. Orthoplasty of the Knee, S. C. Baldwin and D. Hansen; this subject was discussed by L. N. Ossman and L. C. Snow. Sacroiliac Fusion, L. N. Ossman; discussed by C. M. Benedict and G. H. Pace.

Meeting adjourned at 9:25 o'clock.

BARNET E. BONAR, *Secretary*.

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#### UTAH COUNTY

The Utah County Medical Society held a meeting on April 9, at Provo. The topic, discussed generally by the members of the society, was "Medical Economics and the High Cost of Medicine."

Several current articles from recent medical journals and lay magazines were reviewed by the County Medical Society.

The second meeting of the society was held April 23. Dr. L. A. Smith, pediatrician of Ogden, gave an interesting talk on infant feedings.

J. L. AIRD, *Secretary*.

#### UTAH NEWS

One of the outstanding events of the past month was the testimonial banquet tendered by the state association to Dr. Emerson F. Root in recognition of the completion of his fiftieth year in the practice of medicine.

On the night of April 17 a representative gathering of the members of the state association was held at the Alta Club, Salt Lake City, to do honor to this veteran and well-beloved member of their profession.

The occasion was brilliant. In the main dining room of the Club long tables, stretched from head to foot and adorned with flowers, seated some one hundred and fifty of the members from all parts of the state.

Dr. William Donohoe officiated in his own inimitable style as toastmaster for the evening. Responses were made by Doctors H. P. Kirtley, J. W. Aird, Samuel Baldwin, Ezra Rich, and F. S. Bascom. A beautiful memento of the occasion was presented to Doctor Root by the last-named speaker, after which Doctor Root himself responded to both the bouquets and brickbats which had been hurled so generously.

The committee in charge consisted of Doctors H. P. Kirtley, J. C. Landenberger, W. D. Donohoe, R. R. Hampton, L. N. Ossman, M. M. Critchlow, and Sol G. Kahn. The affair proved a splendid occasion of good fellowship.

Meetings of the Academy of Medicine were held during April as follows:

April 10—Round Table Discussion of Physical Therapy, Dr. J. U. Giesy. Physical Examination of the Chest (slides), Dr. Van Scoyoc. Recent Literature on Endocrines, Dr. Tyndale.

April 17—Meeting canceled on account of the banquet to Dr. E. F. Root.

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An Indianapolis general physician who is reputed to be very busy as well as prosperous says that he quite agrees with us in the statement that the majority of the physicians are cutting their own throats by recommending or even approving the frills with which the ordinary sick person surrounds himself. He says that he tells women patients in moderate circumstances that they can have their babies at home, and even with a practical nurse which he finds sufficient, and that the expense is far less than at a hospital. A confinement case at home permits the attending physician to obtain a decent fee that he otherwise might lose. He also says that he doesn't keep surgical cases in the hospital merely as a convenience to himself, but sends them home as soon as it is safe for them to be moved, which practice permits the patient to pay the physician for his visit at the home instead of paying twice as much for the hospital care and have nothing left for the physician. In short, it is his idea that nowadays the average sick person expects and receives not only a good deal of superfluous attention, but more expensive attention than is required in order to secure equally good results. In consequence the sick person pays out more money than he should, and the attending physician often-times gets little or nothing, whereas if the extra and unnecessary attention is cut out the physician could be paid. He claims that his income has doubled since he adopted the plan of rendering more service at the home of the patient, and that his patients have been saved money without the slightest loss of efficiency and service.—Editorial, *The Journal of the Indiana State Medical Association*, February 15, 1930.

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Battling With Locusts.—An editorial in the *New York Times* of April 17 calls attention to the battle of El Arish on the shore of Sinai peninsula, where the British defeated the Turks in 1917, and continues:

"It is another enemy that has threatened Egypt during the past week, and the defenders have gone out to meet the invading hordes in the same desert area in which the Turks were met and driven back. The dispatch says that 'the heaviest fighting occurred around El Arish.' But in this battle it was man fighting his ancient and inveterate enemy, the locust. The Inspector-General of the Egyptian Army was in command, and was accompanied by soldiers and men of the camel corps, but his chief of staff was an entomologist and their weapons were 'flame guns.' The trenches in this campaign were not for their own protection but for trapping the locust enemies, who were destroyed by millions as they advanced in serried bands and fell into the ditches.

"The scene as described in Monday's *Times* was with none of the horrors of war but with all its dramatic incidents: the blazing miles-long trenches, the flanking gunners shooting flames, the phalanxes of men in gasoline-tin armor, the square miles of charred locusts left on the battlefield. And all in the midst of terrific sandstorms and in the oppressive heat of the desert. It is a warfare which suggests some of the battles that civilization will have to continue to wage even after wars cease between man and man. Egypt has again been saved by a victory over the invaders at El Arish, or so it is hoped; but this time by an army under the leadership of an official protector of plants."—*New York State Journal of Medicine*, May 1, 1930.



## MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

### NEWS

**Graduate Summer Course.**—The Stanford University School of Medicine offers a special summer course of lectures and demonstrations for graduates of medicine to be given between Monday, June 16, and Saturday, June 28, 1930.

A detailed program will be sent on request to anyone interested on application to the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco.

**The Thirty-first Annual Session** of the American Proctologic Society will meet at Buffalo on Sunday, Monday, Tuesday, June 22, 23, 24, 1930. The society's headquarters are the Statler Hotel, Buffalo.

**Woman's Auxiliary, American Medical Association.** The eighth annual session of the Woman's Auxiliary of the American Medical Association will convene at Detroit, Michigan, on June 23 to 26. Headquarters will be in the Hotel Tuller. General sessions will begin on Tuesday, June 24, at 9 a. m. in the Arabian Room, at which time reports of officers will be made. Other meetings will follow in regular sequence.

**Awards Made in Del Monte Golf Tournament.**—The Entertainment Committee on Golf has announced the names of the winners in the various entries:

Low net—President's Cup, Dr. R. W. Langley, Los Angeles, 88-24-64.

Low gross—Dr. Robert O'Conner, Oakland, 78.

Class A, 0-17—Low net, Dr. S. V. Christerson, San Francisco, 80-10-70; second low net, Dr. Frank Sheehy, San Francisco, 88-72.

Class B, 18-24—Low gross, Dr. W. H. Brownfield, Los Angeles, 93; low net, Dr. J. E. Hughes, Vallejo, 93-24-69; second low net, Dr. R. Scudder, Fort Bragg, 94-24-70.

April 30, 1930, Pebble Beach Course:

Low net—Dr. O. R. Meyers, Eureka, 98-24-74.

Low gross—Dr. Roderick O'Conner, San Francisco, 88.

Blind Bogey:

Class A—Dr. T. F. Wier, San Diego.

Class B—Dr. W. S. Clark, Ventura.

**The American Association for the Study of Goiter** will hold its annual meeting on July 10 and 11, at Seattle, Washington, and on July 12 at Tacoma, Washington, and Mount Rainier. The following speakers will address the meeting: E. R. Arn, Dayton, Ohio, President's address; Willard Batlett, Jr., St. Louis; Leo P. Bell, Woodland, Calif.; Addison G. Brenizer, Charlotte, N. C.; Harold Brunn, San Francisco; Thomas O. Burger, San Diego; Warren H. Cole, St. Louis; J. Earle Else, Portland, Ore.; William Engelbach, Santa Barbara, Calif.; Gordon S. Fahrni, Winnipeg; N. W. Gillett, Toledo, Ohio; Allen Graham, Cleveland; Samuel F. Haines, Rochester, Minn.; John S. Helms, Tampa, Florida; Lewis M. Hurxthal, Boston; Arnold Jackson, Madison, Wis.; Thomas M. Joyce, Portland, Ore.; E. Starr Judd, Rochester, Minn.; William J. Kerr, San Francisco;

O. P. Kimball, Cleveland; Le Roy Long, Oklahoma City; E. P. McCullagh, Cleveland; K. F. Meyer, San Francisco; R. J. Millzner, San Francisco; Henry F. Plummer, Rochester, Minn.; H. W. Riggs, Vancouver, B. C.; C. A. Roeder, Omaha, Nebr.; Linden Seed, Chicago; J. R. E. Sievers, Butte, Mont.; E. P. Sloan, Bloomington, Ill.; Martin B. Tinker, Ithaca, N. Y.; Robertson Ward, San Francisco; Clarence G. Toland, Los Angeles; John M. Askey, Los Angeles, and Ralph R. Wilson, Kansas City.

**San Francisco Pathological Society.**—The regular meeting of the San Francisco Pathological Society was held on Monday, May 5, 1930, in the Clinic Building of St. Luke's Hospital, Twenty-sixth and Valencia streets, San Francisco.

The following program was provided: Review of the Chicago and New York meetings of several national Pathological Societies, C. L. Connor; Osteochondroma of the Ileum, A. Weeks and G. D. Delprat; Mediastinal Tumor, Leo Eloesser; An Omental Tumor, A. H. Roseberg; A New Concept of Endothelium, James F. Rinehart, and Parathyroid Adenoma, J. Carr.

**Propedeutic Medical Clinic** will be held at Hôpital de la Charité, 37 rue Jacob, Paris, under Professor Sergent from October 20-25, 1930.

Ten lectures on the diseases of the lung with x-ray projections and anatomical specimens, each lecture being followed by practical demonstrations by MM. Bordet, Turpin, Kourilsky and Benda, occupying the positions of former clinical chiefs and clinical chiefs of the clinic.

In the morning practical demonstrations will be held in the wards under the guidance of Professor Sergent.

The afternoon will be devoted to theoretical lectures (from 2:30 p. m. to 3:30 p. m. and from 4 p. m. to 5 p. m.) by Lipiodol in the diagnosis of the diseases of the respiratory tract—F. Bordet. Bronchiectasis (one lecture)—F. Bordet. Abscess of the lung—Kourilsky. Gangrene of the lung—Kourilsky. Carcinoma of the lung (primary)—Turpin. Carcinoma of the lung (secondary)—Turpin. Syphilis of the lung—Benda. Syphilis and tuberculosis—Benda. Mechanism of the tuberculous infection of the lung—Turpin. Tuberculosis of the lung and the new data on the tubercle bacillus—Kourilsky.

For further information and registration, apply to the "Association pour le Développement des Relations Médicales" Salle Béclard, Faculté de Médecine, Paris 6<sup>e</sup>.

**Library Needs of the Medical School of the University of Southern California.**—The reinstituted School of Medicine of the University of Southern California is engaged in laying the foundation of a medical library. Any members of the profession who have files of medical journals or of text or other books in medicine, who would wish to donate or otherwise dispose of the same to a medical institution, will confer a favor by writing to the Dean of the University of Southern California Medical School, Dr. W. D. Cutter, 3551 University Place, Los Angeles, who will be glad to take up the matter further.

**The John Phillips Memorial Prize.**—The American College of Physicians announces the John Phillips Memorial Prize of \$1500, to be awarded for the most

meritorious contribution in *Internal Medicine* and sciences contributing thereto, under the following conditions:

1. The contribution must be submitted in the form of a thesis or dissertation based upon published or unpublished original work.

2. It must be mailed to the Executive Secretary of the American College of Physicians, E. R. Loveland, 133-135 S. Thirty-sixth Street, Philadelphia, Pa., on or before August 31, 1930.

3. The thesis or dissertation must be in the English language, in triplicate, in typewritten or printed form, and the work upon which it is based must have been done in whole or in part in the United States or Canada.

4. The recipient of the prize would be expected to read the essay at the next Annual Meeting of the College, after which he would be officially presented with the prize by the President.

5. The College reserves the right to make no award of the prize if a sufficiently meritorious piece of work has not been received.

6. The announcement of the prize winner will be made not later than two months before the Annual Meeting.

## MEDICAL ECONOMICS

At the Del Monte session of the California Medical Association (April 28-May 1, 1930) the Council of the California Medical Association recommended to the House of Delegates that the California delegates to the Detroit session of the American Medical Association (June 23-27, 1930) be instructed to present resolutions and proposed amendments to the By-laws of the American Medical Association in favor of and for an American Medical Association "Council of Medical Economics."

At the meeting of the Executive Committee held on May 17, the president-elect of the California Medical Association, Dr. Junius B. Harris of Sacramento, who is one of the California Medical Association delegates, was instructed, with his fellow delegates, to sponsor these resolutions and amendments.

Reference thereto is made in one of the editorials in this issue, and also in the minutes of the California Medical Association Council and of the House of Delegates, which are printed in the California Medical Association column. For the information of members, the resolutions and proposed amendments are as follows.

\* \* \*

Whereas, The proper solution of problems in Medical Economics is one of major importance if modern day standards of medical practice and public health are to be properly maintained and safeguarded; now therefore be it

Resolved, By the House of Delegates of the California Medical Association that its delegates to the 1930 annual meeting of the American Medical Association be instructed to request the consideration by the House of Delegates of the American Medical Association of the desirability of forming a Council on Medical Economics of the American Medical Association; and be it further

Resolved, That the House of Delegates of the American Medical Association be informed that the House of Delegates of the California Medical Association recommends the formation of such a Council by the American Medical Association.

\* \* \*

Whereas, The members of the House of Delegates of the California Medical Association at the 1930 Del Monte annual session unanimously voted that the California Medical Association delegates "to the American Medical Association be instructed to attempt to secure the formation of a Council on Medical Economics of the American Medical Association"; now therefore be it

Resolved, By the Executive Committee of the California Medical Association in pursuance of the

said instructions from the California House of Delegates that there be submitted to the House of Delegates of the American Medical Association the attached proposed amendments to the By-laws of the American Medical Association; and be it further

Resolved, By the California Medical Association delegates be instructed to use their best endeavors to secure the approval of the House of Delegates of the American Medical Association to the end that an amendment to the By-laws of the American Medical Association may be adopted which would provide for a Council on Medical Economics.

\* \* \*

### Proposed Amendments to the By-Laws of the American Medical Association

Submitted by the California Medical Association through its own House of Delegates and its delegates to the American Medical Association.

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Amendment to Chapter VII.—Committees:

Sec. 3. to be amended by the addition beneath the words:

(c) "Council on Scientific Assembly."

of the clause

(d) "Council on Medical Economics."

⌘

### CHAPTER VIII. ORGANIZATION OF STANDING COMMITTEES OR COUNCILS

To be amended by the addition of the words "The Council on Medical Economics shall consist of seven members, each elected for seven years." This sentence to be inserted in Sec. 1. immediately after the sentence which reads: "The Council on Medical Education and Hospitals shall consist of seven members, each elected for seven years."

Sec. 2. Officers. To be amended by the addition after the phrase "The Board of Trustees shall elect annually, to serve one year, a secretary of the Council on Medical Education and Hospitals" of the words "and a secretary of the Council on Medical Economics, and shall fix their salaries."

⌘

### CHAPTER IX. DUTIES OF STANDING COMMITTEES OR COUNCILS

To be amended by the addition of a new Sec. 4. to read:

Sec. 4. Council on Medical Economics. The functions of the Council on Medical Education shall be: (1) To investigate conditions of medical economics and to suggest means and methods by which the same may be improved. (2) To endeavor to further the realization of such suggestions as may be approved by the House of Delegates.

## TWENTY-FIVE YEARS AGO \*

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. III, No. 6, June 1905

From some editorial notes:

... *Wasting Material*.—Doctor Osler, at a farewell dinner given him by some five hundred physicians of this country and Canada on May 2, called attention to a general condition which has been pointed out, so far as its local application to San Francisco is concerned, in the pages of the journal. He referred to the tremendous waste of clinical material in this country. . . .

... *Honest Medicines*.—Sufficient time has now elapsed to permit one to judge of the reception by the medical press of this country of the Council on Pharmacy and Chemistry of the American Medical Association. Remember, this Council stands for the principle that *secrecy has no place in legitimate, decent,*

\* This column strives to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.



*professional medicine.* . . . The "root of the proprietary principle" is composed of two branches, secrecy and fraud. Should it not be struck at, and hard? . . .

*From an article on "Medical Inspection of Schools" by Edward Von Adelung, M. D., Oakland:*

. . . An efficient system can be found in Egypt which dates back twenty-two years, in Belgium—for over twenty-six years, in France for twenty years. It has been in vogue for a long time in Switzerland, England, Germany, Russia, and Scotland. It was inaugurated in Japan in 1893. In the United States it was first adopted in Boston in 1894 and Brookline soon followed Boston's example. . . .

*From "Reports Presented at the Thirty-Fifth Annual Meeting of the California State Medical Society":*

*Report of the Editor and the Publication Committee.*— . . . In view of these facts, it is a pleasure to report to you that the just criticisms which have been voiced in the pages of your journal have been very largely instrumental in the organization, by the trustees of the American Medical Association, of a "Council on Pharmacy and Chemistry." . . .

. . . We consider the stimulation of county societies the most important function of your journal. . . .

*Report of the Council.*— . . . Two publications of this society, the *Journal* and the *Register*, speak for themselves. The stand taken by our journal in the interests of legitimate and standard pharmaceutical preparations has made it unique in journalism in the United States. This work has been ably conducted by the editor, with the assistance of the Publication Committee, and has had a tendency to bring about great and lasting results. . . .

. . . During the session of the legislature the secretary mailed to each officer of the state society and to the president and secretary of every component society, from time to time, a circular letter giving, briefly, information relative to measures pending before the legislature. . . .

. . . Santa Clara County Society has made formal request that your honorable body rule upon the eligibility of homeopathic or eclectic physicians who may be members of homeopathic or eclectic medical societies to become members of component societies of the Medical Society of the State of California. . . .

Membership in 1905 and 1906:

	Last Year	This Year	Gain	Loss
Alameda County.....	113	125	12	....
Los Angeles County.....	278	315	37	....
Sacramento County.....	45	48	3	....
San Francisco County.....	464	521	57	....

*An excerpt from the "California Medical and Surgical Reporter," entitled "Some Personal Impressions":*

There was an excellent opportunity to study some strong medical personalities at the Riverside meeting of the Medical Society of the State of California (California Medical Association):

President Adams, frank, open-faced and genial, even when corrected on points of law by his right bower, the state secretary; Dr. Philip Mills Jones, a paradox of alertness in a somewhat attenuated and languid physical frame who, like President Adams, was genial even in his positive interpretations of the Constitution and By-Laws of the society; Dr. Dudley Tait, polished expounder of the state medical laws, a popular-unpopular member, whose comings and goings were of interest to all; Dr. Rooney, president-elect for 1906, pleasant in manner and feature, and raconteur of an inexhaustible fund of stories; Dr. Norman Bridge, like Dr. Tait, positive and outspoken in his conceptions of things; Dr. H. Bert. Ellis, leisurely alert and smilingly aggressive; Dr. Walter Lindley, moving here and there, but leaving, no doubt, the impress of his presence; the venerable Dr. Orme, a faithful member and officer of the state society through many past years; and so on through a whole host of workers in our noble guild, to mention all of whom with proper words would require much more space than is at our disposal.

## DEPARTMENT OF PUBLIC HEALTH

By W. M. DICKIE, Director

**Prevalence of Trichinosis Is Exceptional.**—The past five months have brought to California a larger number of cases of trichinosis than have ever occurred within the state during a like period of time. A total of 132 cases were reported during the period December 1, 1929, to April 5, 1930. During the calendar year 1929, there were but thirty-three cases of trichinosis reported, and during the first fourteen weeks of this year, 105 cases have been reported.

While it is true that most cases, this season, found their sources of infection in sausages, both home-made and commercially prepared, a considerable number of cases were traced to the use of pork meat which was improperly cooked. No less than twenty-one of the 132 cases that have been reported during the past winter season, were due to the use of under-cooked pork meat. A very few cases were due to the use of commercially packed sausages, which were not thoroughly cooked before eating, and most of them were due to the use of home-prepared salami, mettwurst and to other types of sausages which were not thoroughly cooked before being eaten. Complete death records are not available at this time, but, in so far as they are available, it would appear there have been two deaths from trichinosis in Trinity County, one in San Francisco and five in El Dorado County. The group of cases which occurred in Trinity County are particularly interesting for the reason that they were due to the use of smoked bear meat. This is the first instance on record in which infected bear meat has caused trichinosis in California.

It is the consensus of opinion among public health authorities that no method of inspection has yet been devised by which the presence or absence of trichinae in pork can be determined with certainty. There is but one way to absolutely avoid the contraction of trichinosis and that is to cook all pork products to a temperature of 160 degrees Fahrenheit before serving. Fresh pork should be cooked until it becomes entirely white and there is no longer any red color left. Pickled pork, smoked pork and similar methods of curing pork products may render them safe in so far as trichinosis is concerned, but since the thoroughness of the curing process is not always a certainty, it is safer to thoroughly cook all pork meat, at all times, before eating it.

At the meeting of the State Board of Public Health held in San Francisco, April 12, 1930, trichinosis was made a reportable disease. The attention of health officers is drawn to this fact. All practitioners of medicine should be advised of this fact, in order that cases of trichinosis, or cases which may be suspected as cases of trichinosis, may be reported properly.

**Many Deaths from Heart Disease.**—Diseases of the heart and circulatory system caused 23.9 per cent of all deaths in California last year. In 1920, diseases of the heart and circulatory system caused 17 per cent of all deaths in California. There were 8013 deaths from this cause out of a total of 47,124 deaths from all causes in the year 1920. In 1929, there were 15,620 deaths from heart disease out of a total of 65,363 deaths from all causes. The increase in the numbers and percentages of deaths from heart disease in California during the past ten years has been gradual, but persistent. The increase, however, casts no reflection upon the health resources of California, particularly when it is noted that more than 60 per cent of all deaths from heart disease in this state last year were in persons more than 65 years of age, and almost 20 per cent of such deaths were in persons who were between 55 and 64 years of age. Men must, of necessity, die of some condition.



## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, M. D.  
Secretary of the Board

### News Items, June 1930

A corporation cannot practice medicine, Superior Judge Samuel Blake ruled yesterday in a precedent decision of widespread importance. The decision was in the case of *People vs. Medical Service Corporation*, in which Attorney-General Webb brought *quo warranto* proceedings to cancel the franchise of the concern on the ground it was engaging in business in which the law forbids a corporation to participate. . . . Judge Blake said in part: "A corporation cannot, of course, as a corporation, pass the medical board examination and can only act through its agents. The right to practice medicine attaches to the individual and dies with him, and it cannot be made the subject of business sheltered under the cloak of corporations having marketable shares descendable under the rules of inheritance. All the directors of this corporation or stockholders may be licensed practitioners, but at any time these directors or officers, by death or otherwise, may transfer their shares and it might be succeeded by laymen, none of whom possess the right to practice medicine." . . . "Unprofessional conduct on behalf of the corporation could not be reached, such as aiding or betraying a professional secret, advertising or offenses involving moral turpitude, and many others too numerous to mention. . . ." Judge Blake pointed out in his memorandum that his decision does not affect hospitals and charitable institutions now in existence which are corporations (*Los Angeles News*, May 1, 1930).

According to reports, the National Health Foundation, Ltd., alleged to be incorporated in Nevada, has established headquarters in the Beaux Arts Building, Los Angeles, offering a comprehensive medical service to members at a cost of \$2 per month each, which includes physical examination, doctor's prescriptions, hospitalization, accidents, ambulance, x-ray, eye, ear, nose and throat, physiotherapy, clinico-biological laboratory tests, etc.

"Dr." Arthur Benson, the asserted head of the Thayer Health Foundation, was sought for again today as the city prosecutor's office continued a probe of charges that operations of the institution have constituted a huge medical fraud. The charges were made at an indignation meeting in the office of Prosecutor Lloyd Nix when two hundred former patients of the Foundation gathered to tell of paying \$100 to \$1000 for a course of treatments for various diseases, some of which were actual and others apparently invented by the Foundation's attaches. . . . (*Los Angeles Express*, April 23, 1930). The records of the Board of Medical Examiners relate that Benson pleaded guilty in the courts of Los Angeles on January 6, 1928, to a charge of violation of the Medical Practice Act and paid a fine of \$250, following which he is said to have employed licensed chiropractors, osteopaths, and medical doctors to give all treatments, his place being operated since his arrest under the name of the "Golden Rule Health Institute," assertedly by Clara Brown, a chiropractor. (Previous entry, February, 1928.)

\* Following the death of Miss Evelyn Winifred Hughes, age twenty-seven, in Yuba City last Friday, Dr. Fred B. Tapley of Marysville was placed under arrest and he has been indicted by the Yuba County Grand Jury and charged with murder in the second degree for performing an illegal operation on Miss Hughes which caused her death. This is the second time a criminal charge of this kind has been made against Doctor Tapley. He was tried by a jury in the Superior Court of Yuba County in February of

last year on the charge of murder and performing an illegal operation on Mrs. Eva Griffith of Encinal, Sutter County, who had died May 21, 1928. The trial ended with the jury acquitting Doctor Tapley of both charges after it had deliberated for only ten minutes. At that time the State Board of Medical Examiners revoked his license to practice medicine or surgery. He brought an action in the Superior Court of San Francisco, but that court upheld the decision of the board and he then appealed to the Appellate Court, and his appeal is pending at present. In the meantime he was allowed to continue his practice (*Yuba City Farmer*, April 18, 1930).

A scar on her arm damaged her to the extent of \$25,000, according to a suit filed in Superior Court here yesterday by Miss Hazel Quinn, 1049 Santa Barbara Court, a radio artist. The suit names as defendants, Miss Minnie Belle Barnett and the Tricho Institute, a beauty parlor. . . . (*Sacramento Union*, May 1, 1930). The records of the Board of Medical Examiners show a large number of reported permanent disfigurements following treatment by Tricho and other x-ray machines in attempted removal of superfluous hair. It is reported that three suits for damages are now pending in the courts of San Francisco.

According to report of our Investigation Department, Magnetic Darius of Boston, Massachusetts, who recently burst into print by advertising a course of lectures in San Francisco, is alleged to have been formerly known as Terrence Hogan, assertedly a "soap-box lecturer" on Mission Street. The advertising relates that "Darius is destined to startle and intellectually delight the nation, a throwback to the ancient, classic Greeks. In physical mold—Godlike. A new voice in the wilderness."

Dun Chun, alias Kung Tao, Chinese herbalist, 1053 Stockton Street, San Francisco, at the time of his arrest on a charge of violation of the Medical Practice Act, produced the first Anglo-Oriental medical Correspondence School diploma that we have seen. This interesting document, partially in Chinese and partially in English, is dated Shanghai, December 1925, and signed Dr. Wainyard, M. D., purporting to have been issued by the Shanghai Oriental Medical Correspondence School, whatever that may be.

Dr. Raymond C. Howe, 2576 Florence Avenue, Huntington Park, yesterday was ordered held for trial in Superior Court, charged with performing an illegal operation. . . . (*Los Angeles Illustrated Daily News*, April 17, 1930). The records show Raymond C. Howe is a licensed chiropractor.

According to reports, Maurice LeBelle was on April 15 sentenced in Los Angeles to pay a fine of \$100 on a charge of violation of the Medical Practice Act. Fifty dollars of said fine was suspended for six months and \$50 paid, although Section 24 of the Medical Practice Act provides that the minimum fine shall be \$100.

Arthur G. Loye was reported to have pleaded guilty in Los Angeles on April 14 to a charge of violation of the Medical Practice Act and was sentenced to pay a fine of \$500 or serve fifty days in jail, sentence being suspended on condition that he change his advertising as soon as possible.

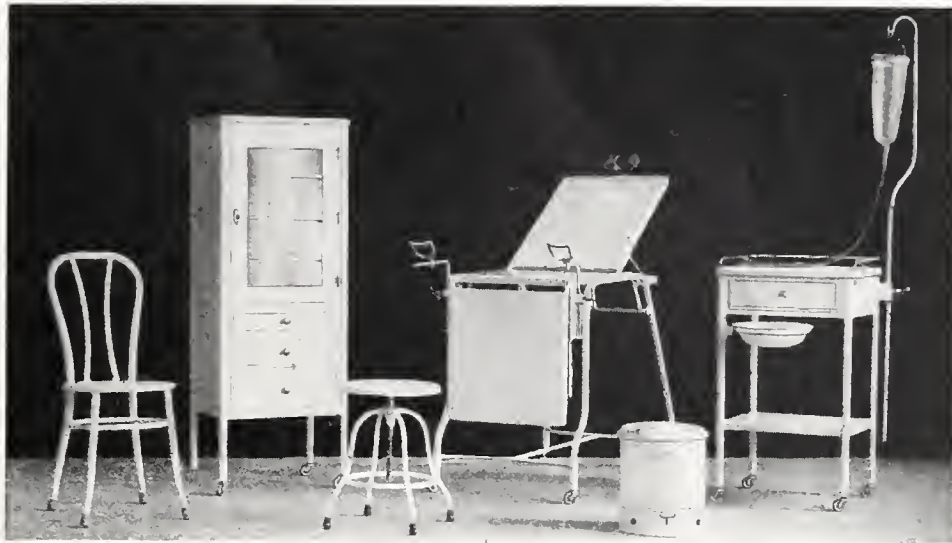
Charged with violation of the Harrison Act, Dr. S. M. Mann, 740 National Avenue, National City, was bound over for trial in Federal Court after a hearing yesterday before United States Commissioner Henry Ryan. . . . The charge against Doctor Mann alleged the unlawful issuing of narcotic prescriptions in violation of the federal law, according to arresting officers (*San Diego Union*, April 30, 1930).



# THE AMERICAN SURGICAL SALES CO., LTD.

Better Service

SAN FRANCISCO    OAKLAND    SAN JOSE    FRESNO    SEATTLE    PORTLAND



No. 0561 Tassco Economy Six-Piece Set

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*Or Liberal Cash Discount*

*The American Surgical Sales Co., Ltd., owns and operates the following stores:*

**THE TRAVERS SURGICAL COMPANY, Inc.**

429 Sutter Street, San Francisco

**THE BISCHOFF SURGICAL HOUSE**

427 20th Street, Oakland, Calif.

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**THE AMERICAN SURGICAL SALES CO.**

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**REID BROS., Inc.**

91 Drumm Street, San Francisco, Calif.

1417 4th Avenue, Seattle, Wash.

416 Taylor Street, Portland, Oregon

The Largest Physicians, Hospital and Sick Room Supplies Company in the West  
We Manufacture and Fit Trusses, Supporters, Elastic Stockings, Corsets, etc.

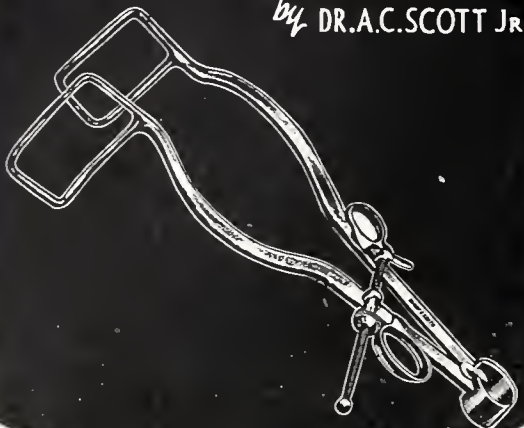
**RICHARD H. TRAVERS**  
*President*

**FRED J. BISCHOFF**  
*Secretary and General Manager*

**PRESENTING**

**AUTOMATIC  
ABDOMINAL RETRACTOR**

*by* DR. A.C. SCOTT JR.



This retractor is provided with a quick-lock screw adjustment. This device holds the retractor open at any point, and maintains an even pressure at the blades.

Price . . . . . **\$7.50**

## To Help -

Sharp & Smith have as their abiding purpose—"Service" to the thousands of patrons whose confidence has made SandS the leading source of Hospital Supplies and Surgical Instruments.

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Physiotherapy Courses Given by the Doctors on the Hospital Staff and the Director of Physiotherapy.

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COURSE No. 1: For Graduate Nurses and Physical Education Students. Sept. 12, 1930–Sept. 12, 1931. Fee \$85.00.

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Training given in the treatment of all Orthopedic Cases.

Apply to: MISS LILY H. GRAHAM

Director, Physiotherapy Dept., Children's Hospital, Los Angeles, California



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**PACIFIC COAST HOSPITALS**

Write for Sample

**HEXOL, INC., 1040 Larkin Street, San Francisco, California**  
FRANKLIN 1012

## TRUTH ABOUT MEDICINES

(Continued from Page 31)

**Van Ard Sanatorium.**—The Van Ard Sanatorium, Inc., does a quack rheumatism-cure business from an old brick residence on the south side of Chicago. It is an Illinois corporation with an authorized capital of \$10,000. Its officers are listed as J. B. Creevy, president; H. L. Cassel, secretary. They are the same individuals who are, or were, connected with the "Cass Treatment for Rheumatism." The impression is given in the Van Ard advertising that Charles J. Cahill, who is connected with the business of the

firm, has special knowledge of the treatment of rheumatism. Needless to say, Cahill's name is unknown to scientific medicine. Just as in the Cass Laboratories' fake the letters were signed "Harvey L. Cass" (a person who didn't exist), so in the Van Ard Sanatorium quackery most of the letters are signed "J. B. Crenon, Secretary." And just as "Harvey L. Cass" was really Harvey L. Cassel, so, doubtless, "J. B. Crenon" is Joseph B. Creevy! Reports were received from California of three deaths in which the principal autopsy finding was an extreme degree of atrophy of the liver. The reports brought out that two of the women had been taking the Van Ard "treatment,"



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Successors in San Francisco to

### Millbrae Dairy

*The Milk With More Cream*



We deliver daily from  
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to  
Menlo Park

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while the third had been taking the Cass "treatment." From the results of chemical analyses carried out in the American Medical Association Chemical Laboratory it may be stated that the Van Ard treatment consists essentially of acetylsalicylic acid (aspirin), cinchophen, sodium bicarbonate (baking soda), and a laxative. It is obvious that the Van Ard and Cass "treatments" are for all practical purposes identical. In the Cass treatment it was Epsom salt, flavored, while in the Van Ard treatment it seems to be phenolphthalein and aloes.—*Jour. A. M. A.*, April 19, 1930, p. 1255.

"S. C. A." Soluble Antigen, "S. C. A." Serum Equine (Concentrated), and "S. C. A." Serum Bovine (Unconcentrated).—The Council on Pharmacy and Chemistry issues a preliminary report reviewing the available evidence published by J. C. Small concerning preparations stated to represent products obtained from the bacterium claimed to be the cause of rheumatic fever. Preparations of this organism were presented to the Council by the H. K. Mulford Company as S. C. A. Soluble Antigen, S. C. A. Serum Equine (Concentrated) and S. C. A. Serum Bovine (Unconcentrated). The Council decided that the published work of Small does not offer sufficient evidence to warrant the acceptance of the Mulford products. Further doubt has been cast on the value of this therapy by the paper of Dr. May G. Wilson, in which it is reported that the administration of *Streptococcus cardioarthritidis* antiserum and of the soluble antigen of *Streptococcus cardioarthritidis* did not seem to influence the usual clinical course of the disease or prevent the occurrence of relapses. The Council holds that, while the products are suitable for controlled clinical investigation by experimental workers, propaganda which invites their general use is not warranted at this time.—*Jour. A. M. A.*, April 26, 1930, p. 1303.

**Undulant Fever Bacterial Vaccine.**—The Council on Pharmacy and Chemistry reports that the Jensen-

(Continued on Next Page)

## Suggest this Pure Fruit Juice, so rich in Food Values

YOUNG and old relish the delicious mel-low taste of '49 Brand California Grape Juice. For general diet and hospital use '49 Grape Juice is unsurpassed because of its high percentage of natural invert sugar, valuable mineral salts, and stimulating laxative properties.

An exclusively controlled process is responsible for the fresh, lasting purity of '49 Brand. All the natural goodness of selected, mature grapes is brought to you in '49. Nothing—not even sugar—is added to the pure juice.

Physicians, dietitians or hospitals interested in learning more about '49 Brand California Grape Juice, either Red or White, may write to



## VITA-FRUIT PRODUCTS INC.

RUSS BLDG., SAN FRANCISCO  
GRAPE JUICE PLANT AT LODI

### PARROTT & CO.

SALES	REPRESENTATIVES
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SEATTLE	TACOMA
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# Rainier Pure Grain Alcohol U S P

*The only pure alcohol manufactured on the  
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RAINIER PURE GRAIN ALCOHOL IS DOUBLE DISTILLED AND IS  
ABSOLUTELY ODORLESS

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## Mercurochrome -220 Soluble

(Dibrom-oxymercuri-fluorescein.)

**The Stain Provides for Penetration  
and  
Fixes the Germicide in the Tissues**

Mercurochrome is bacteriostatic in exceedingly high dilutions and as long as the stain is visible bacteriostasis is present. Reinfection or contamination are prevented and natural body defenses are permitted to hasten prompt and clean healing, as Mercurochrome does not interfere with immunological processes. This germicide is non-irritating and non-injurious when applied to wounds.

**HYNSON, WESTCOTT & DUNNING, INC.**

Baltimore, Maryland

## TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

Salsbery Laboratories, Inc., have presented Undulant Fever Bacterial Vaccine (Jensen-Salsbery) for consideration by the Council. This product is stated to be a physiologic saline suspension of *Brucella melitensis* (var. *abortus* 75 per cent, and *suis* 25 per cent). From an examination of the published reports the Council's referee came to the conclusion that this material does not offer adequate evidence for the usefulness of the product and that this form of treatment should be subjected to further controlled clinical trial. The Council voted to publish its preliminary report and to postpone definite action on the question of accepting Undulant Fever Bacterial Vaccine (Jensen-Salsbery) while awaiting the development of further evidence of its therapeutic value.—*Jour. A. M. A.*, April 26, 1930, p. 1304.

**Incorrect Labeling of Upsher Smith Digitalis Preparations.**—Tablets Folia-Digitalis (Upsher Smith) one grain, Tincture Digitalis (Upsher Smith) and Capsules Folia-Digitalis (Upsher Smith) one grain, were exempted by the Council on Pharmacy and Chemistry as having the status of official substances. The Council reports that a committee for the study of the actions of digitalis in patients suffering with pneumonia used tablets of digitalis (Upsher Smith) and tablets of digitalis of another firm, and directed that patients receive these in uniform doses calculated to induce a moderate degree of digitalization, assuming that both specimens of tablets were correctly labeled; that after a total of 258 patients had been treated it was discovered that the tablets of digitalis (Upsher Smith) induced both severe and minor toxic symptoms far more frequently than those of the other firm, and that an examination of the records brought out that minor toxic symptoms were more than ten times as great in those who received the Upsher Smith tablets as in those who received the other



For use in the Prevention and Treatment  
of the Acid-Ash Type of . . . . .

# ACIDOSIS

## California Lima Bean FLOUR!

*Alkalinity*, of course, neutralizes *acidity*. And Limas are one of the most alkaline foods known—41.65 per 100 grams!

To meet a definite demand from the medical profession, we have developed, to a high degree of fineness, a Lima Bean FLOUR—for making non-acid breads, muffins, pancakes and waffles for Basic Diet menus!

Lima FLOUR is available in 10-lb. bags at \$1.20, and in 100-lb. bags at \$10.00. Upon receipt of price and delivery instructions your order will be shipped parcel post or express collect. Send orders, and make check or money order payable to—

CALIFORNIA LIMA BEAN  
GROWERS ASSOCIATION

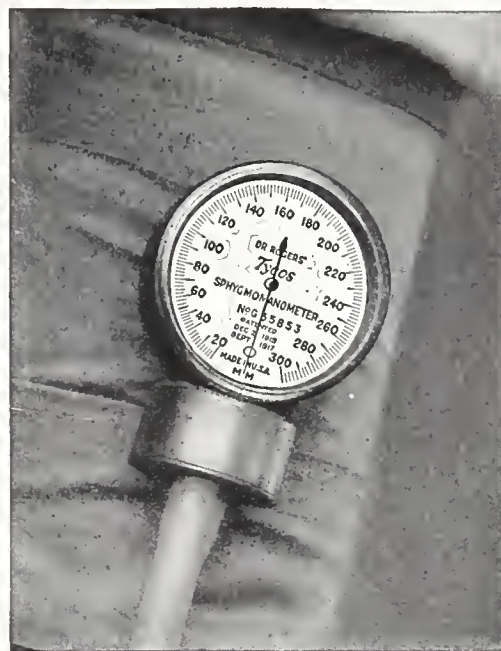
Oxnard, California

firm's tablets and that the mortality was 49 per cent of all cases of pneumonia treated with the first, as compared with 38 per cent in all those treated with the other tablets. The Council further reports that both brands of tablets were then assayed; that the tablets of the other firm were found to be of activity stated on the label, and those of Upsher Smith to be twice the activity stated. Upsher Smith has assured the Council that any of his misbranded preparations on the market will be called in, and that in the future the greatest care will be taken to insure that the potency of these will be stated correctly.—*Jour. A. M. A.*, April 26, 1930, p. 1305.

**Therapeutic Claims for Theobromin and Theophyllin Preparations.**—The Council on Pharmacy and Chemistry reports that, questions having arisen in regard to the advertising claims that might be permitted for the xanthin derivative preparations accepted for New and Nonofficial Remedies, the Council's referee for these products presented a review of the important literature, with special reference to the value of xanthin derivatives in vascular hypertension and arteriosclerotic conditions. In the light of this review, the Council decided that the following claims could be permitted for both theobromin and theophyllin: (a) diuretic action; (b) myocardial stimulation; (c) occasionally (and more often with theophyllin) relief of pain in angina and similar lancinating pains. It does not seem permissible to claim lowering of hypertension.—*Jour. A. M. A.*, April 26, 1930, p. 1306.

**The Cutaneous Absorption of Mercury.**—It requires little imagination to appreciate the uncertainties that must attend the problem of dosage when such a relatively insoluble substance as mercury is applied to the skin. The size of the particles, the nature of the adjuvant, the place of application and its conditions, and the vigor with which inunction is practiced are some of the complicating features. The assumption that only the mercury globules rubbed into the folli-

(Continued on Next Page)



## Tycos Pocket Type Sphygmomanometer

**T**WENTY-TWO years ago the first Tycos Sphygmomanometer was placed on the market. Although modifications have been made whenever desirable, fundamentally the instrument remains the same today.

Every Tycos Sphygmomanometer has adhered to an indisputable principle—that only a diaphragm-type instrument is competent for the determination of blood pressure. To faithfully record the correct systolic pressure, an indicator's accuracy must not be affected by the speed at which the armlet pressure is released, only a diaphragm instrument can guarantee this. To honestly give the true diastolic pressure, a sphygmomanometer must respond precisely to the actual movements of the arterial wall, again, only a diaphragm instrument can do this.

Portable, the entire apparatus in its handsome leather case is carried in coat pocket. Durable, its reliability in constant use has been proved by many thousands of instruments during the past twenty-two years. Accurate, its precision is assured by relation of the hand to the oval zero.

Further information relative to the Tycos Pocket Type Sphygmomanometer will be furnished upon request.

Write for new 1930 edition of Tycos Bulletin #6 "Blood Pressure-Selected Abstracts." A great aid to the doctor who wishes to keep abreast of blood pressure diagnosis and technique.

*Taylor Instrument Companies*

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CANADIAN PLANT  
TYCOS BUILDING  
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MANUFACTURING DISTRIBUTORS  
IN GREAT BRITAIN  
SHORT & MASON, LTD., LONDON-E 17



*Analyzed and Certified Products*

NITROUS OXIDE  
MEDICAL OXYGEN  
CARBON DIOXIDE, ETHYLENE  
INTRAVENOUS AND  
INTRAMUSCULAR MEDICATIONS  
PHARMACEUTICALS

We maintain fully equipped commercial and research laboratories with facilities for all classes of analytical determinations. These additions to our plants have made it possible to conduct routine quantitative tests on all of our products, thus insuring you against fatalities due to haphazard production.

In addition to medical gases we also manufacture a full line of intravenous and intramuscular medications and are prepared to make up special formulas.

We solicit your coöperation in the ethical advancement of intravenous medications as well as anesthesia.

## CERTIFIED LABORATORY PRODUCTS

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1379 Folsom Street, San Francisco, California

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American Chemical Society, American Medical Association, American Hospital Association, American Association of Engineers, National Anesthesia Research Association.

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San Francisco's largest  
medical-dental build-  
ing designed and built  
exclusively for physi-  
cians, dentists and af-  
filiated activities.

The 8-floor garage for  
tenants and the public  
is the West's largest—  
holding 1000 cars.



Four-Fifty Sutter St. San Francisco

## TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

cles are gradually absorbed had led to the clean inunction method proposed by Cole and his collaborators. Some indication of the efficacy of inunction procedures can be secured by estimation of the substance that is eliminated. This has been done, and it was found that the amount of mercury which is absorbed had excreted after inunction is dependent directly on the concentration of the metal in the base—that is, 5, 25, and 50 per cent preparations show that the excretion is about in proportion to the concentration in the ointment used. Again, contrary to what many have assumed, colloidal mercury ointments showed no greater excretion of mercury than official old-fashioned mercury ointments of equal concentration in benzoinated lard. Furthermore, massive or intensive weekly inunctions of a 30 per cent mercurial ointment may lead to an equal or higher mercury excretion than the simple daily use of 50 per cent ointment or even certain types of intramuscular injection.—*Jour. A. M. A.*, April 26, 1930, p. 1322.

**John R. Brinkley, Quack.**—John R. Brinkley of Milford, Kansas, has for years been quacking it but, having his own so-called hospital, it has been possible for him to keep his own records, so that only by accident do the results of his work become public. The newspaper publicity that has recently been given to Brinkley is beginning to bring to light some of the crudities of his work. Brinkley's "specialty" is the alleged sexual rejuvenation of the male by the (also alleged) implantation of goats' testicles into the human scrotum. Naturally, the deluded individuals who go in for this particular line of medical humbug are not going to complain after they have found that they have been swindled. If Brinkley had been shrewder, he would have confined his quackery to this particular field. More recently, however, he has been going into the treatment (still, alleged) of pros-



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state trouble and, naturally, men do not have the same hesitancy about discussing operations for the relief of pathologic conditions of the prostate that they do in talking about sexual rejuvenation. The *Kansas City Star*, which has been giving its readers a great deal of information about Brinkley's methods, has now published some interesting material from Brinkley victims who throw light on the way in which he uses his radio station to get in touch with persons and how he treats them at his hospital.—*Jour. A. M. A.*, April 26, 1930, p. 1339.

**The Baker Ballyhoo.**—Norman Baker, the high-pressure gentleman at Muscatine, Iowa, who has recently invaded the medical field with two quack cancer cures—those of Ozias and Hoxsey—continues to get publicity. This in addition to the very good job that he does over his own radio station, KTNT. Recently newspaper accounts have appeared stating that Baker had claimed that an attempt had been made on his life and that an attempt has been made to blow up his radio station. These reports were not confirmed. The only other newspaper items that have been noted regarding Baker are the reports of cancer victims who have died following the Baker Institute "treatments."—*Jour. A. M. A.*, April 26, 1930, p. 1340.

**Tobacco Advertising Gone Mad.**—The modern tendency for advertisers of all kinds of merchandise to drag the health angle into their advertisements is one of the most disturbing features in the modern advertising field. The medal for the most horrible example would seem to go to the American Tobacco Company in the exploitation of Lucky Strike cigarettes and Cremo cigars. The exploiters of Lucky Strike cigarettes have claimed that eighteen thousand physicians have testified that "the heat treatment, or toasting process, applied to tobacco previously aged and cured" is likely to free the cigaret "from irritation to the throat." There was also started a campaign, "Reach for a

(Continued on Next Page)

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### **TRUTH ABOUT MEDICINES**

(Continued from Preceding Page)

Lucky instead of a Sweet," in which—either directly or by implication—young women were urged to smoke Lucky Strike cigarettes when they had a desire to eat candy or pastry. Another branch of the American Tobacco Company's business has been carrying on an advertising campaign for "Cremo" cigars in which the public is led to believe that most cigars are hand-made and have their tips finished off with the saliva of the individual workman. Physicians will readily admit that many young women eat more candy than is good for them, but they will certainly not agree that the substitution of cigarettes in such cases is in the interest of public health. Physicians may also admit that, theoretically, it is possible for disease to be transmitted by means of cigars. But when one considers the millions of cigars that are

consumed annually and that it is extremely difficult to find in medical literature any real evidence of the transmission of pathologic bacteria by means of cigars, the campaign of the Cremo concern stands condemned.—*Jour. A. M. A.*, March 15, 1930, p. 810.

**More Misbranded Nostrums.**—The following products have been the subject of prosecution by the Food, Drug, and Insecticide Administration of the United States Department of Agriculture which enforces the Federal Food and Drugs Act: Kroy Wen All Healing Ointment (The Manhattan Drug Company), consisting essentially of carbolic acid, zinc oxid, boric acid, sulphur, and a volatile oil in a mixture of wax and wool-fat. Wag's Salve (Wag's Chemical Company, Inc.), a petrolatum product with oil of wintergreen and menthol. Winter Cerate (The Irvine Chemical Company), an ointment having a petrolatum base and containing the usual volatile oils. Amex (The Craig-Grandell Manufacturing Company,



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Inc.), an ointment having a petrolatum base and containing oil of wintergreen, oil of peppermint, menthol, and myrrh. Quin-Lax (James Bailey and Son), containing acetanilid, cinchonin, aloin, and cornstarch. Neuro-Nerve Powders (The Neuro Chemical Company) containing aspirin, phenacetin, and caffeine. Laxative Phospho Quinin (Brewer & Company, Inc.), containing acetanilid, cinchona alkaloids, phenolphthalein, red pepper, gamboge, and some other materials. Glycero-Terpin Compound (Boss and Seiffert Company, Inc.), containing a codein salt, chloroform, terpin hydrate, ammonium chlorid, tolu, glycerin, and alcohol. Salicon (K. A. Hughes Company), containing 3.8 grains of aspirin, with phenolphthalein and calcium and magnesium carbonates. Capsi-Quin (Boss and Seiffert Company, Inc.), containing about 1 grain of quinin sulphate,  $1\frac{1}{2}$  grains of acetanilid, and a small amount of red pepper in each tablet.—*Jour. A. M. A.*, March 15, 1930, p. 811.

**Annual Meeting of the Council on Pharmacy and Chemistry.**—The Council on Pharmacy and Chemistry held its annual meeting at the association headquarters March 7 and 8. Extended consideration was given to the work of the newly established Committee on Foods and the proposed publication of the book "Accepted Foods." The progress made appeared satisfactory and the work appears to be appreciated by the profession, the public, and manufacturers. The Council discussed the status of the streptococcus preparations for the treatment of rheumatic fever made in accordance with the method of J. C. Small: it was the consensus that, while these products are suitable for controlled investigation by qualified experimental workers, propaganda which invites their general use is not justified at this time. The Council decided that the available evidence does not demonstrate the usefulness of puerperal fever streptococcus serum. The Council decided to continue the accept-

(Continued on Page 43)

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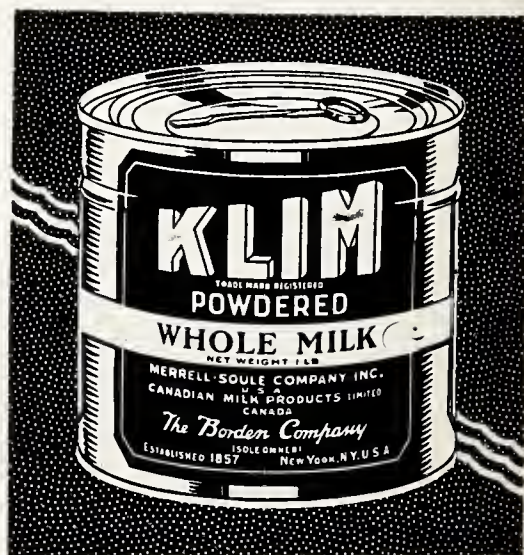
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### TRUTH ABOUT MEDICINES

(Continued from Page 41)

ance of Type I antipneumococcic serum for New and Nonofficial Remedies; that Type II serum is still in the experimental stage; and that pneumococcic serum preparations representing a mixture of Type I and II pneumococci be considered unacceptable. It was decided that, while adequate clinical evidence for the potency of a liver extract must be required before acceptance, further clinical testing will not be required after a product has been shown to be active and the method of preparation shown to be satisfactory. The Council considered the rules that are to govern the use of the seal to be used by manufacturers to identify products accepted for New and Nonofficial Remedies or for Accepted Foods. The Council approved a proposed study of commercial allergic protein preparations and offered coöperation. The Council considered a proposed manual for the guid-

(Continued on Next Page)

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## TRUTH ABOUT MEDICINES

(Continued from Preceding Page)

ance of hospitals to be prepared by a committee appointed by the Council on Medical Education and Hospitals with the coöperation of the Council on Pharmacy and Chemistry. Plans for the consolidation of various committees concerned with anesthesia were discussed.—*Jour. A. M. A.*, March 22, 1930, p. 874.

**Ethylhydrocuprein.**—Clinicians of large experience have grown skeptical about the use of ethylhydrocuprein (optochin) in the treatment of pneumonia, whereas they were once enthusiastic, and hopeful about its possibilities. In a review of this subject, Cahn-Bronner cites an extensive literature and concludes from his own experience and a review of numerous authors that ethylhydrocuprein is not superior to quinin and that neither drug is a specific



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in the treatment of pneumococcus pneumonia. The following, with reference to ethylhydrocuprein, appears in New and Nonofficial Remedies: "Clinical investigation indicates that the drug may be of value in the treatment of lobar pneumonia, if a sufficient amount can be administered sufficiently early without untoward effect. To avoid such effect it is proposed to secure low absorption through the administration of the free base by mouth. The hydrochlorid may be administered intramuscularly, but is liable to be irritant. Intravenous administration seems to be contraindicated. The drug has a definite value in the treatment of pneumococcal infections of the eye (ulcus corneae serpens)."—*Jour. A. M. A.*, March 22, 1930, p. 888.

**Collosol Calcium Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that Collosol Calcium was

(Continued on Page 46)





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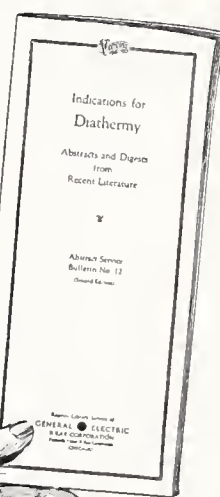
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## TRUTH ABOUT MEDICINES

(Continued from Page 44)

presented by the Crookes Laboratories, Inc., as a colloidal suspension of calcium oleate, containing approximately 0.85 per cent of calcium oleate and 0.05 per cent of calcium. The preparation is stated to contain 1 per cent gelatin as a protective colloid and 0.5 per cent of phenol and 0.1 per cent of chlorbutanol as preservatives and to be intended for hypodermic and intramuscular injection. A similar preparation, Collosol Calcium Oral, containing the same amount of calcium oleate, is intended for oral administration. The Council reports that the label of the submitted specimens and the advertising makes no mention of gelatin, phenol, or chlorbutanol. After examination of the available evidence the Council declared Collosol Calcium unacceptable for New and Nonofficial Remedies because it is an unscientific preparation of no proved value and marketed under unwarranted therapeutic claims. When the Council's report was sent to the Crookes Laboratories, Inc., the firm expressed willingness to mention on the label the presence of gelatin, chlorbutanol, and phenol. It submitted a new advertising booklet and offered to submit further evidence. Since there appeared to be no possibility of the product being made acceptable, the Council authorized publication of its report.—*Jour. A. M. A.*, March 29, 1930, p. 920.

**FC-100.**—Recently Pittsburgh papers reported that two officers and two employees of a Pittsburgh bank had been poisoned following the taking of a "remedy for a cold." Investigation disclosed that the nostrum these four men took was known as "FC-100," put on the market by the Food Chemistry Corporation of Pittsburgh, which has for its president P. S. Chambers. Presumably, this is the same P. S. Chambers who was connected with the American Chemical Company of Pittsburgh and the Research Laboratories

of Pittsburgh, exploiters of AL-14, another nostrum exploited for the cure of colds. The Food Chemistry Corporation is today circularizing bank presidents and suggesting, by implication, that these bank executives purchase FC-100 for themselves and their employees. From an examination made by the American Medical Association Chemical Laboratory it may be concluded that the specimens of FC-100 examined consisted essentially of an effervescent mixture consisting of citric acid, potassium and sodium bicarbonates, along with traces of calcium and magnesium, and an overdose of an arsenic compound. Here, as in the case of AL-14, \$2 was charged for twelve tubes containing a few cents' worth of citric acid and baking soda, put out under the claim that the preparation is "not a drug" and that it is quickly effective in curing 90 per cent of common colds!—*Jour. A. M. A.*, March 29, 1930, p. 1010.

**Modilac Not Acceptable for New and Nonofficial Remedies.**—The Council on Pharmacy and Chemistry reports that Modilac is the proprietary name under which the William S. Merrell Company markets a compressed tablet containing milk sugar and some salts, recommended for the "humanizing" of cow's milk to render it suitable for infant feeding. In 1925 the Council held Modilac not to be within the scope of New and Nonofficial Remedies because no medicinal claims were made for it, and included the product in the list of exempted articles. From an examination of the present advertising it appears that medicinal claims are now being made for the product, thus bringing it within the scope of New and Nonofficial Remedies. These claims were found to be unacceptable and, therefore, the Council voted that the exemption of Modilac be rescinded and that it be considered unacceptable for New and Nonofficial Remedies because it is an unscientific mixture of official articles marketed under a nondescriptive proprie-

(Continued on Page 48)



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## TRUTH ABOUT MEDICINES

(Continued from Page 46)

tary name and with unwarranted therapeutic claims.—  
*Jour. A. M. A.*, March 8, 1930, p. 716.

**Jean Jacques Laboratories.**—For some time one I. Francis Purdy has been exploiting a piece of aphrodisiac quackery through the United States mails. Recently the postal authorities called a halt on the matter and, after a hearing debarred Purdy's business from the mails. Purdy's trade style was "Jean Jacques Laboratories," operating from 3104 Michigan Avenue, Chicago. Purdy was selling through the mails a medicinal preparation that he called "Oxcen-tric" which was supposed to be a cure for lost sexual vigor and prostatic trouble in men of all ages. The preparation was put up for him by the Bierstedt Suppository Company of Chicago.—*Jour. A. M. A.*, March 8, 1930, p. 735.

**Misbranded Pharmaceuticals.**—During 1929 Notices of Judgment were issued by the Food, Drug and Insecticide Administration of the United States Department of Agriculture against the following pharmaceutical products that were found adulterated or misbranded—or both—under the Food and Drugs Act: Bland's Modified Tablets (Pharmaceutical Products Co., Inc., Easton, Md.); Chloramine-T Tablets (Smith Dorsey Co., Lincoln, Neb.); Creosote Compound Mixture (Charles Killgore, New York City); Sirup of Ipecac (William R. Warner & Co., Inc., New York City); Tincture of Belladonna Leaves (Frank G. Scott, Detroit, Mich.); Hyoscyamus (Henbane Leaves) (McIlvaine Bros., Inc., New York City); Calomel Tablets (Frank G. Scott, Detroit, Mich.); Calomel and Phenolphthalein Tablets (Pharmaceutical Products Co., Inc., Easton, Md.); Sodium Bicarbonate (James Good, Inc., Philadelphia); Morphin Sulphate Tablets (Frank G. Scott, Detroit, Mich.); Morphin and Atropin Tablets (Smith-



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Dorsey Company, Lincoln, Neb.); Codein Sulphate Tablets (Frank G. Scott, Detroit, Mich.); Aletris (Unicorn Root) (Sig. Wallace, Statesville, N. C.); Rheumatism Tablets (P. H. Mallen Co., Chicago); Spigelia (Pink Root) (R. Hillier's Son Co., Inc., Jersey City, N. J.); Cinchophen Tablets (Pharmaceutical Products Co., Inc., Easton, Md.); Citrated Magnesia (New England Magnesia Company, Boston, Mass.); Acetphenetidin Tablets (Pharmaceutical Products Co., Inc., Easton, Md.); Tincture of Aconite (Pharmaceutical Products Co., Inc., Easton, Md.); Tincture of Iodin (George A. Breon & Co., Kansas City, Mo.); Citrated Magnesia (Philadelphia Magnesia Co., Philadelphia).—*Jour. A. M. A.*, February 15, 1930, p. 501.

**The Hazard of Using Nonaccepted Drugs.**—Recently the American Medical Association Chemical Laboratory published a report on Bichloridol capsules indicating that only from one-tenth to one-fifth of the amount of mercuric chlorid claimed to be present was actually discovered. The results of the American Medical Chemical Laboratory have received independent confirmation. Apparently most of the mercuric chlorid had reacted with the lining of the capsule and was not in the medicament itself. This product has been administered to patients by physicians who thought that they were giving a certain dosage of mercuric chlorid, whereas the patient received only from one-tenth to one-fifth of the dose he should have had. In 1925 the Council on Pharmacy and Chemistry declared Bichloridol unacceptable for New and Nonofficial Remedies. It is safer to follow the Council.—*Jour. A. M. A.*, February 22, 1930, p. 563.

**Misbranded Pharmaceuticals.**—During 1929 Notices of Judgment were issued by the Food, Drug and Insecticide Administration of the United States Department of Agriculture against the following pharmaceutical products that were found adulterated or misbranded—or both—under the Food and Drugs Act:

(Continued on Page 53)

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(Continued from Page 49)

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**Education by Discussion.**—The *New England Journal of Medicine*, in a recent number, commented upon a statement by Muirhead to the effect that in the United States discussion as a method of promoting knowledge did not exist. By discussion is understood a calm, dispassionate exchange of ideas with the object of arriving at truth, or as near truth as possible. Concerning most questions the American, according to this writer, either knows it all, or is not at all interested. In either case discussion is out of the question. It is not that we do not talk. Take, for instance, the perennial subject prohibition—enough is said, but there is practically no modification of our attitude regarding it, whichever side we happen to favor.

The editorial in the *New England Journal of Medicine* relates that a proposed meeting of physicians to discuss birth control had to be given up because it was thought that such discussion would divide the profession and wreck a certain county medical society. Medical education is another topic that evidently is not amenable to discussion in the East.

Probably the lack of disposition to indulge in calm deliberation is a national characteristic. It may be due to climate or what not. More than one European observer has commented upon the spirit of intolerance that is apt to be accorded any vital subject in this country. A subject that is purely academic is apt to be met with lack of interest or indifference.

And yet we look forward to conferences, Leagues of Nations, world courts, as a means of preventing future conflicts. It would seem that the remedy would be in a greater use of debate, especially in the discussion of such subjects as admit of difference of opinion. This would include, so far as medical societies are concerned, all topics of a medico-social nature. Debate properly conducted demands a sort of intellectual sportsmanship that should prevent cleavage in any group of intelligent people.—Editorial, *The Journal of the Michigan State Medical Society*, April, 1930.



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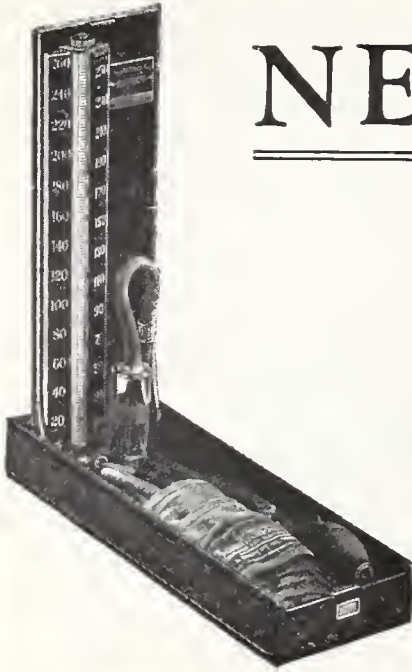
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but your county medical society, and it is high time that you learned to "cut your belt" for the latter and do it willingly and cheerfully without being clubbed to it.—Editorial, *Journal of Indiana State Medical Association*, January 15, 1930.

**Vienna's "Mutterschulen."**—The city of Vienna, Austria, has started schools for mothers in which they are taught about nutrition and nutritional disturbances, infectious diseases and protective inoculation, care of the new-born and of well and sick children, mental hygiene of children, and the hygiene of sleep. Lessons on children's songs and games and the making of children's clothing may be added. The courses are under the direction of a woman physician and a woman welfare worker.—*United States Department of Labor, Children's Bureau.*



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Excerpts from American Medical Association Essentials for an Approved Clinical Laboratory

## DEFINITION

*"\* \* \* A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body."*

*"Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved."*

*"The housing and equipment should be sufficient to permit all essential technical procedures to be properly carried out."*

## THE DIRECTOR

*"The director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry or other allied subjects, for at least three years. He must be a man of good standing in his profession."*

*"The director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work."*

*"The director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports."*

*"The director may have assistants, responsible to him. All their reports, bacteriologic, hematologic, biochemical, serologic and pathologic should be made to the director."*

## RECORDS

*"Indexed records of all examinations should be kept. Every specimen submitted to the laboratory should have appended pertinent clinical data."*

## PUBLICITY

*"Publicity of an approved laboratory should be directed only to physicians either through bulletins or through recognized technical journals, and should be limited to statements of fact, as the name, address, telephone number, names and titles of the director, and other responsible personnel, fields of work covered, office hours, directions for sending specimens, etc., and should not contain misleading statements. Only the names of those rendering regular service to the laboratory should appear on letterheads or other form of publicity."*

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*"\* \* \* There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group. \* \* \*"*

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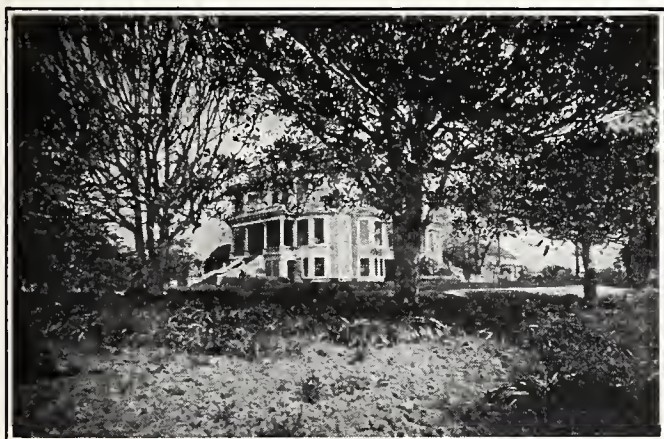
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(0.56 per cent)—probably because women are more observant of the principles of dental hygiene. Cancer of the kidney and bladder is also more common among men, causing 2899 deaths (2.8 per cent), and only 1685 among women (1.6 per cent).—*Health News.*

**Cost of Medical Care.**—Seventy dollars per family was the average cost of medical care during a recent six-months period of over three thousand working-men's families selected for study from the insured list of the Metropolitan Life Insurance Company. The total expenditure for these families during this period was \$230,907. The expenditures for the larger families averaged less per capita than for the smaller families, and one-fifth of the families expended nearly two-thirds of the total.—*United States Department of Labor, Children's Bureau.*

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**H**AY FEVER, as it occurs throughout the United States, is actually *perennial* rather than *seasonal*, in character.

Because in the Southwest—Bermuda grass, for instance, continues to flower until December when the mountain cedar, of many victims, starts to shed its pollen in Northern Texas and so continues into February. At that time, elsewhere in the South, the oak, birch, pecan, hickory and other trees begin to contribute their respective quotas of atmospheric pollen.

But, nevertheless, hay fever in the Northern States at least, is in fact seasonal in character and of three types, viz.:

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**"Air Doctors"—The Development of Medical Aviation.**—The air ambulance with silent engines which, it was announced during the week, is being made for use in remote parts of the Empire, will probably be the beginning of a new and interesting Empire service.

France has already formed a branch of what is called medical aviation for her African colonies, and during 1928, the year of its formation, it was responsible for the transport of 239 patients from outlandish parts of Algeria, Morocco, and the Levant to centers where they could be properly treated. The planes are Farmans, one type of which carries, in addition to doctor and nurse, six patients on stretchers, and the other type twelve persons sitting or ten on stretchers. The United States Department of Commerce has also secured air ambulances for use in the Great Lakes district, where sick persons in isolated settlements are often carried with speed to hospital or clinic. The planes in use here are fitted with wheeled cots, hot and cold running water, electric fans, etc.

It is for grappling quickly with an epidemic, however, that medical aviation is expected to prove itself most useful. Of this there was an illustration in Canada last year. Diphtheria broke out in a trading post along the banks of the Peace River, Alberta, and the only doctor available, sent for by dog sled from Fort Vermilion, soon found himself handicapped by lack of serum. He sent word of his need, by the means of a dog team, to the nearest town, and within a few hours two airmen were soaring northward with supplies of serum that saved many lives—though this was an ordinary open plane, and not a medical one.

Organized medical aviation was first employed in Siam, a country in which epidemics have hitherto spread with dread rapidity. In the winter of 1927 an epidemic broke out in the Ubol province, and, with the quick exhaustion of medicines, cases multiplied to an alarming extent. The Governor telegraphed to Bangkok, and the health director there telephoned to the air commandant at Don Muang, a special train, with doctors and nurses, being prepared at the same time to leave for the flying ground.

Within a few hours of taking-off in six aeroplanes the doctors and nurses were coping successfully with the epidemic, and the King was so impressed that he headed a public subscription to buy a number of planes, filled with medical equipment and ready to go at a moment's notice to any part of the country.

Used in coöperation with wireless, with which the world's lonely outposts are being gradually equipped, medical aviation is probably destined to nip in the bud many a terrible plague.—*The Observer*.

**White and Whole-Wheat Breads Both Wholesome, Say Scientists.**—White and whole-wheat breads both are wholesome foods. They are among the most important and cheapest sources of energy and protein in the diet. The composition and value in the diet of whole-wheat and white bread vary not only with the differences in the flour used, but also with the amount and character of other added constituents.

Whole-wheat or graham flours, which contain the bran and germ portion of the grain, have lower bread-making capacity and are more susceptible to spoilage, so cannot be handled as readily commercially. In general they contain more essential minerals and vitamins and more roughage than white flour.

No person subsists on one food. Each food should be chosen in relation to the other constituents of the diet. Bread, either white or whole-wheat, is always an economical source of energy and protein in any diet. The form may be left to the choice of the individual when the remainder of the diet is so constituted as to contribute the necessary minerals, vitamins, and any necessary roughage.—*United States Department of Agriculture*.



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3. Patients have the advantage of modern laboratory aids to diagnosis and of all modern therapeutic agencies.
4. The climate of Colfax enables the patient to take the cure without discomfort twelve months in the year. We believe climate is secondary to medical supervision and rest, but the fact remains that it is easier to "cure" under good climatic conditions than where these climatic conditions are absent.
5. Colfax is accessible. It is on the main line of the Ogden Route of the Southern Pacific R. R. and has excellent train service. It can be reached by paved highway, being on the Victory Highway, with paved roads all the way to Colfax.

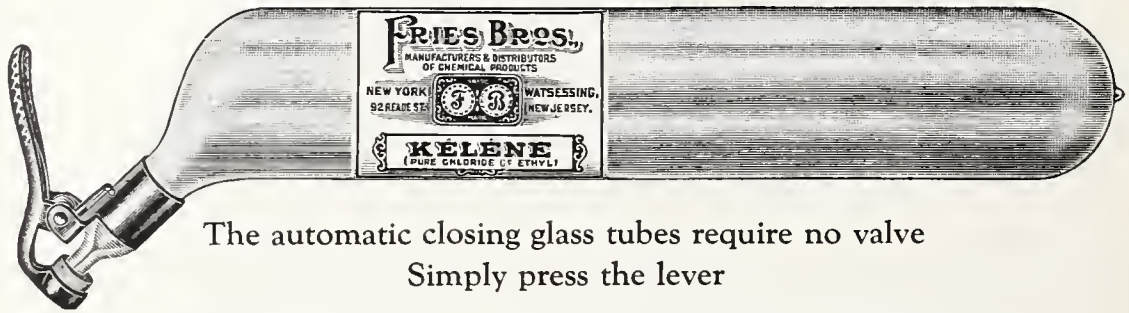
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**Investigation of the Etiology of Rheumatism.**—A generation ago Painter and Payner announced the cause of rheumatic fever to be a streptococcus and indeed bacteriologists for some time have accepted the idea that this fever was due to one of the streptococci, but this particular one belongs to a group of streptococci that has been somewhat overlooked.

Recently an article was published by Dr. Konrad E. Birkhang on "Bacteriologic Study in Acute Rheumatic Fever, with Reference to Soluble Toxin Production" in Proceedings of the Society of Experimental Biology and Medicine, 1927, Vol. 24, in which he reports practically the same results obtained with a streptococcus isolated from the blood of persons suffering with acute rheumatic fever as published by Doctor Small. He states that the organism named streptococcus cardio-arthritis by Doctor Small is probably identical with that isolated by him, as well as by several other workers, and called by other names.

There is at least a good chance that a solution of the acute rheumatism problem may soon be found. This is doubly important, as the solution of this problem carries with it the solution of the heart disease problem. Doctor Small is able to grow this coccus and use it on laboratory animals to make an antitoxin, which is more than a simple antitoxin in that it kills the coccus as well as neutralizes the toxin. He has used this antitoxin on a small series of cases of acute rheumatic fever in human beings and thereby cured them in a way that has every resemblance to the way diphtheria antitoxin cures diphtheria.

Therefore it would seem from the knowledge we have at the present time that acute rheumatic fever is caused by a particular variety of streptococcus, which will produce a soluble toxin. The fact that this particular variety of streptococcus can be isolated from the throat of these persons would indicate that the mode of entry into the system is through the

respiratory tract. This is probably the same kind of streptococcus that was isolated by Poynton and Paine in 1900. Recently we have been better able to classify the streptococcus into definite groups such as those that cause scarlet fever, erysipelas, acute rheumatic fever, etc.

When the particular coccus was taken from the throat and grown on culture media and then injected into rabbits, it caused a disease that had the earmarks of rheumatism. When the sick rabbits were killed and their hearts examined, Aschoff's bodies were found. These bodies are characteristic of acute rheumatic fever. The cocci persist in those subacute rheumatic joint conditions which so frequently follow acute rheumatic fever. In certain cases the symptoms were those of St. Vitus' dance, which is a full brother to acute rheumatic fever.—Charles Rudolph, M. D., *Western Medical Times*, October 1929.

**Control of Disease.**—Because of unusual sanitary problems resulting from location and topography, unique and original engineering designs in the National Parks are not infrequently employed by the Public Health Service. At Grand Canyon National Park, for example, water for all purposes must be hauled in railroad tank cars for many miles. This water is used for domestic purposes and discharged into the sewers in the usual manner. Almost 90 per cent of this sewage is then reclaimed by various ingenious methods of treatment and filtration and is used over again for supplying water to boilers at the power plant at Grand Canyon and to the boilers of the passenger and freight locomotives which run between Williams and the Canyon. The reclaimed water has practically the same degree of bacteriological purity as that required by drinking water.—*Public Health*.



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### I. KEY TO ABBREVIATIONS

Add.—Address.

Or.—Original Article.

C. R.—Casé Report.

B. M.—Bedside Medicine.

Ed.—Editorial.

M. T.—Medicine Today.

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\* \* \*

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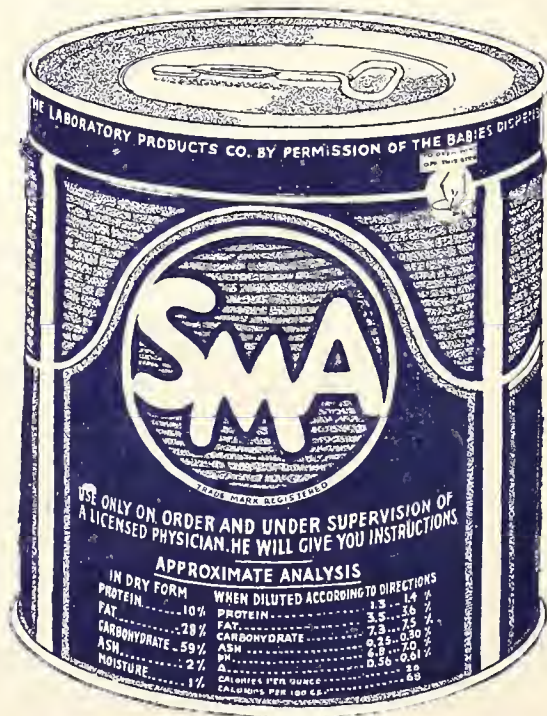
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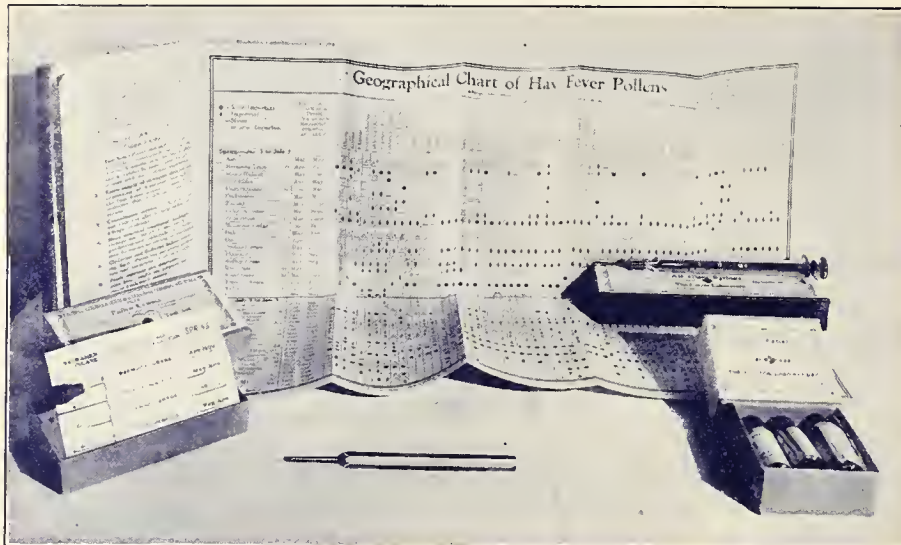
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